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SEPTEMBER 1973

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WEEDS TREES and TURF

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"Serving The Green Industry"

Sharpen To Prune 14

Pruning saws must be kept sharp in this business. Here's a step-by-step article on how to sharpen your saws. Robert A. Fanno, Fanno Saw Works, Chico, Calif. is the author.

We Could Have Looked The Other Way 16

When water hyacinths and other aquatic weeds invaded the placid waters of Lake Corpus Christi, area residents lost much of the use of the water. Fishery biologist L. V. Guerra describes what was done to rid the area of it's weed problems.

Systemic Fungicides — Powerful Tool In Disease Control 18

If you have trouble knowing when and where to use the new systemic fungicides, read this article. Dr. Paul Sartoretto, technical director, W. A. Cleary Corporation, shows turfgrass managers how to get the most out of "systemics."

Budgets Up Weeds Out In Idaho 22

Canyon county, Idaho, is one of the top producing counties in the nation for crop seed. Weed control along highways is important. Fields adjacent to roads could easily be recipients of unwanted weed seeds. County maintenance men and weed specialists have kept constant vigil to control weeds.

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If you have a problem with leaves that no one wants, consider the soluion several communities have tried. They've turned the leaves into valuable compost with the aid of special emzymes.

Chemical Governor For Nature's Time Clock 26

Growth retardants and growth regulators can add a new tool in management for the turfgrass manager, arborist, or other groundskeeper. Read how they work on plants and what some organizations are doing to regulate plant growth.

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Lewis E. Coleman has built Automated Lawn-Buildors, Inc. into a thriving lawn service business. This year he contracted for about 14 million square feet of lawn care.

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The Cover

"Unwanted tree stumps can be a safety hazard and a nuisance. Our cover shows Martin Cooper of E. D. Boteller, West Friendship, Md. operating a stump cutter in the grassy area of a private school in the Washington D. C. area. Stump removers such as this can be a handy addition to an arborist's growing line of services.

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Burned Up And Burned Out

Modern managers in the Green Industry are highly capable of managing those in their employ who advance on the ladder of success one rung at a time. The natural inclination toward personnel bureaucratic expansion in growing businesses plus the speed of the computer has enabled employers to chart the career advancement path of employees with a high rate of accuracy.

But the lack of latitude and imagination in this system of management can cause managers to lose top employees because they don't fit into the square hole. These employees can best be described as those in a great hurry to get to the top. Nearly all of us have known one of these individuals. They are dedicated men who accept duties with ease, accomplish the job and more in minimum time, adjust readily to increased responsibilities, work long hours without complaint and are highly business and job oriented.

Coping with the management problems of this type individual can present the greatest challenge faced by employers. A man who wants to move hard and fast is often disillusioned by management's lack of response in compensation. He enjoys the hard work, thrives on accomplishment and appreciates praise, but recognizes that compensation must be forthcoming in order to personally maximize profits. Too late he recognizes the inconsistency in the give-and-receive relationship of business and leaves the job burned up.

That's one problem faced by management. Another is the fact that while this man is moving hard and fast he may be on a path to self-destruction. He may literally burn himself out in the job, says a public relations executive of a large chemical firm. "He goes at such a pace that the routine of the job loses its challenge within a few years."

Author Eda J. LeShan in The Wonderful Crisis of Middle Age says that this is the most tragic of all cases. The "burned-out boy wonders" have the most difficult time adjusting to the pace of business in midcareer.

The situation confronting managers is finding the right management techniques that keep gifted employees from becoming "burned up" or "burned out."

How does the employer do this? We submit that managers need to critically examine each of these individuals and adopt a different set of criteria for their career development. Business track stars should not be forced to fit the square hole fash-

(continued on page 36)

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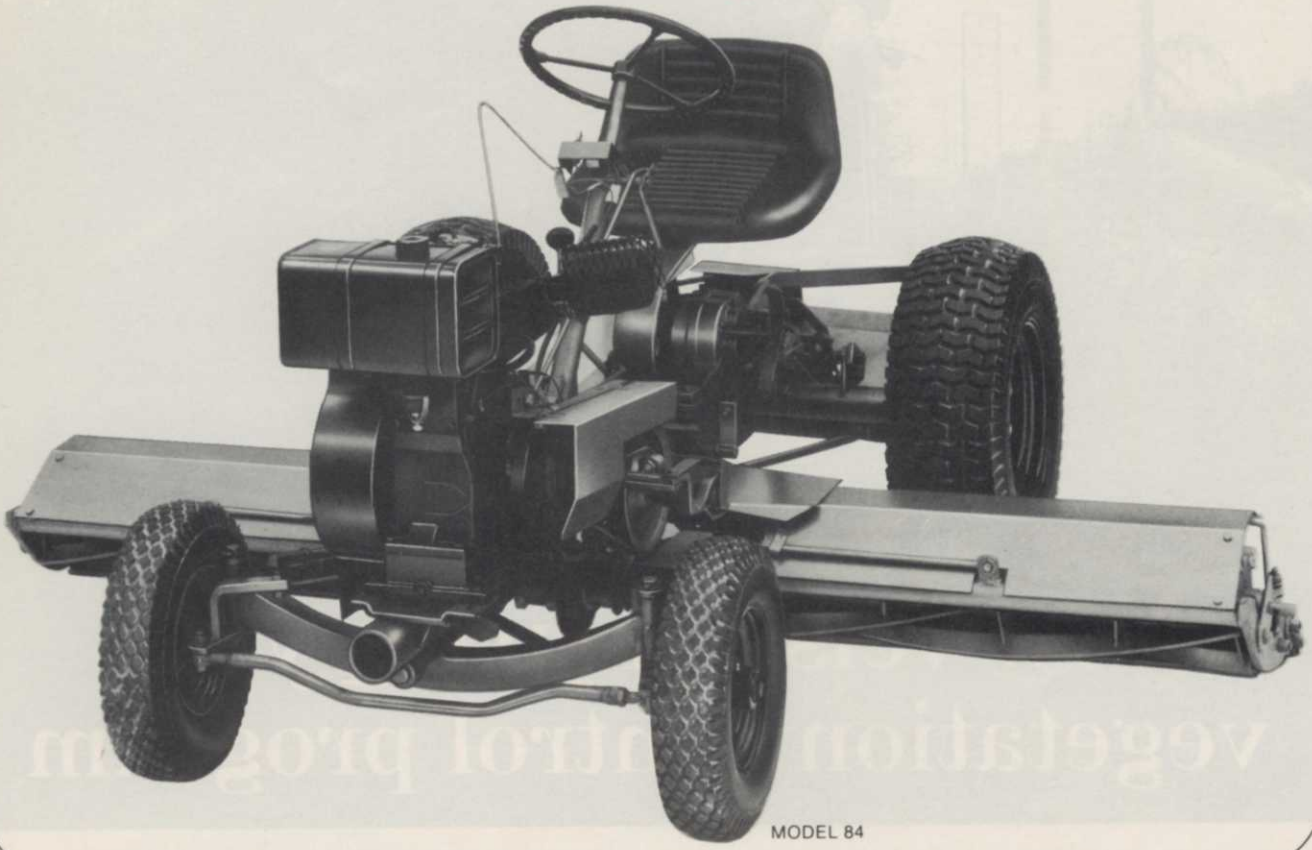

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PEOPLE

Ditch Witch factory workers are craftsmen who build a quality product in a large, modern plant designed strictly for the efficient production of trenching equipment. Starting with top-quality raw materials and components, Ditch Witch experts shape the parts and carefully assemble them into the finished product. They use the most up-to-date equipment and production techniques to help them do their job better and quicker.

But there's another all-important element necessary. It's a genuine concern for doing their best — a conscientious attention to every detail. And it shows in every Ditch Witch trencher. With people like these on the Ditch Witch team, it's not surprising that Ditch Witch is the leader.

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DITCH WITCH

. . . offering a full line of trenching equipment from 7-HP to 65-HP.

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Government News / Business

Forecasts indicate that fuel oil will be in tight supply this fall. Already there are spots in the country where supplies are low to critically low. The northeast and parts of the midwest (Wisc., Mich., Ia.) have the greatest danger of running out. This means applicators using No. 2 diesel oil for dormant cane sprays may find supplies run out before the season does. Test work by Velsicol indicates a way to circumvent the problem. According to Chuck Middleton, a modified low oil basal treatment can reduce the amount of dormant oil by 80 percent and still give satisfactory results. He says to use Accutrol nozzles, diesel fuel and Banvel. You spray two-thirds of the main stem and leaves. Advantages: 1. Greater penetration in the stem area; 2. Air emulsion of Accutrol causes spray to look white, thus acting as a marker; 3. There's a 3:1 expansion factor in using this setup. Tank mix goes farther. You can reduce the amount of oil used by 80 percent with the substitution of Banvel in the tank, Middleton says.

The Environmental Protection Agency has Officially changed leadership. Russell E. Train becomes Administrator for the agency, replacing Robert W. Fri, who was Acting Administrator. His background is heavy in law, conservation and management.

Don't count on getting early delivery on equipment and machinery. Large manufacturers of farm equipment and other machinery are backlogged with orders. Some reports from manufacturers indicate that current orders will not be filled until well into next year. Problems in manufacture include short supplies of steel, parts, competing with expanded foreign markets, and labor. One midwestern dealer commented that he had already sold next year's equipment allocation by the end of July, 1973. Everything in his shop had someone's name on it.

Manufacturers of environmental protection chemicals should prepare for an increase in paperwork and forms. An EPA proposed regulation under the Federal Environmental Pesticide Control Act (FEPCA) would identify all producers and formulators of pesticides, both inter- and intrastate. This also includes those in the repackaging business. Plants must send in application for registration. EPA will assign each establishment a registration number. This number must appear on each pesticide produced by the plant. For interstate commerce, plants, including exporting and importing, have until December 24 to submit applications. For intrastate commerce, applications must be submitted to an EPA regional office by October 21, 1974.

Thirty days after registration, and annually thereafter, producers must submit a report on the types and amounts of pesticides which are currently being manufactured, what was produced during the past year, and what was sold or distributed during the past year. Those reports are due to EPA by March 1, 1974 for the coming year. In 1975, the reports will be due February 1.

Bay Pipe & Supply, Inc., Concord, California has been appointed a distributor for Weather-matic lawn and turf irrigation products, according to C. S. Putnam, sales manager for Weather-matic Division, Telsco Industries.

Sandoz-Wander, Inc. has acquired the crop aids department of International Minerals and Chemical Corp. Acquisition price was not disclosed. Included in the exchange are Thuricide, a Bt compound and Viron/H, a polyhedrosis virus insecticide used in cotton.

WINNER
in all categories

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2. Fylking's rhizome root system develops so thickly sod can be lifted in 90 DAYS. (see right)
3. Fylking seed tests show 97-99% purity, and 85% germination.
4. Fylking seeds germinate and grow faster. 11-day comparison with another elite bluegrass shown below right.
5. Fylking can be mowed at 3/4 inch (even 1/2 inch) and thrive.
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7. Fylking is a superior mixer. With other lawn grasses it greatly improves turf quality and density.
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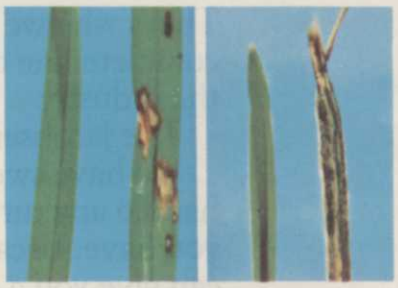

U. S. Plant Patent 2887. Another fine product of Jacklin Seed Company,

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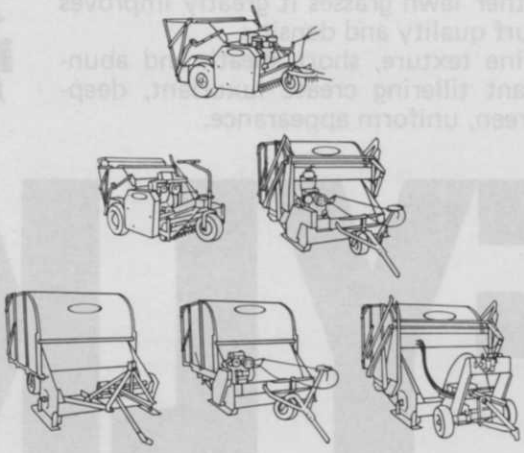

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SWEEPER

SHARPEN TO PRUNE

By ROBERT A. FANNO
The Fanno Saw Works
Chico, California

A DULL pruning saw is about as useful to a tree climber as a 100 pound backpack. There's a drag on both that can't be tolerated very long.

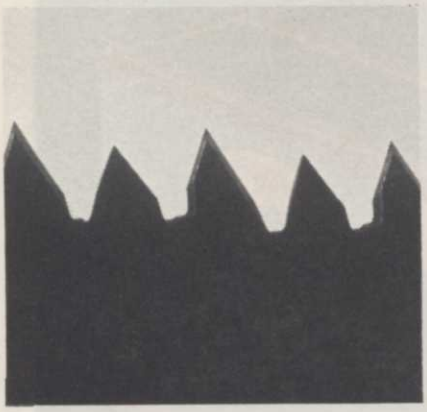
Pruning saws are at the heart of the business for the professional arborist. A recent survey of professionals in this field showed more than 25 percent of every job bid involved pruning and trimming. With this kind of interest, tree care men have a high stake in keeping pruning saws in top shape.

Yet when it comes to keeping this important tool sharp, few arborists know the steps involved in successful saw sharpening. Basically, there are five critical steps to sharpening: joint, shape, set, bevel, file.

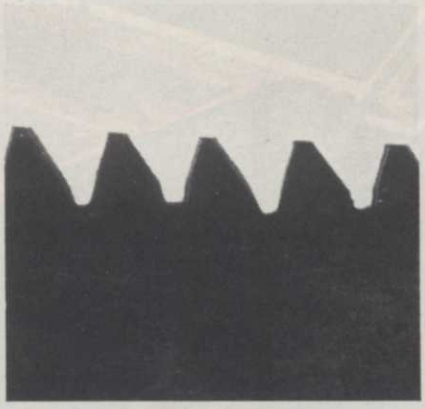
The pictures tell the story. Note that you can usually tell whether a saw needs sharpening by the bevel and the unevenness of the teeth.

By jointing, the teeth are brought to a standard height. This step gives the saw sharpener a new starting point to continue with the rest of the sharpening steps. It is best accomplished by using a large flat file. One or two strokes of the file across the tips of the teeth will usually be sufficient. The trick is not to file off any more of the teeth than necessary to bring all of them to a standard height.

Shaping comes next. Nine out of ten times this step can be avoided. It's only needed on saws that have



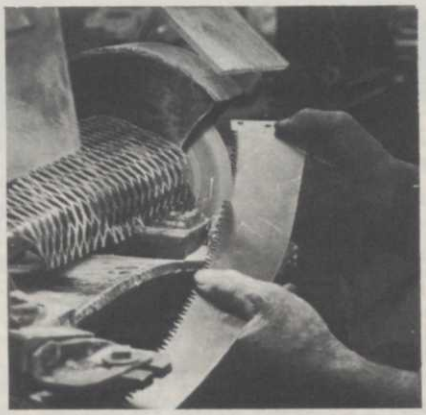
This is a typical saw that needs to be sharpened. Notice how the teeth are uneven in height and bevelled wrongly. It does not cut cleanly or smoothly.



The blade above has now been jointed. Jointing is the process where the teeth of the saw are brought to the same height. This gives you a starting point.

Use a large flat file to joint curved pruning saws. Usually one or two strokes across the tips of the teeth running the blade length will do it.

For straight saw blades, use a jointing tool. Note how saw blade is securely held in the vice so it won't wiggle or come loose.



This is called shaping. You can avoid this step most of the time. It's only needed if saw is badly sharpened or neglected.

What you see is the set of the saw. It refers to the alternating tooth pattern while looking down from above. It's important that saw set is correct.

been badly sharpened or neglected. Shaping brings the teeth back to their original size and shape. Generally, a grinding wheel applied lightly to the teeth will quickly accomplish the job.

Probably the most important step in sharpening a pruning saw is setting. The set of a saw refers to the alternating tooth pattern. You can see this by looking down on the tops of the teeth. The average of amount of set is .025 to .030 inches for each tooth. This means that each tooth should be set left or right of tooth center by just a fraction of an inch.

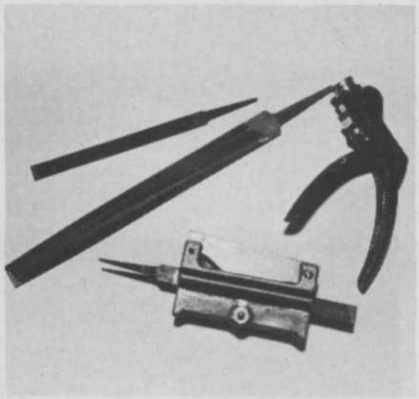
When cutting green or fibrous wood, you'll need more set. Some arborists refer to this as bite. Hardwoods and deadwoods need a lighter set in the saw. The set of the saw determines the amount of cutting edge exposed to the cutting surface. You can put set in a saw by hand or by machine. Stanley Tools makes a pistol-grip saw setting tool that is easy to use and accurate enough for the professional arborist. If you hand set your saws you set the teeth on one side and then turn the blade over and set the other side. A good vice is a must.

If you are looking for shortcuts, consider a combination of the last two steps. In the process of filing, you also put a nice bevelled edge on the tooth. Our saws at Fanno Saw Works have the edge of the teeth bevelled about 15 degrees. Other saw manufacturers vary. We also have a four degree negative hook on our saw teeth. This refers to the direction of the teeth and also where the cutting edge is placed in relationship to a given centerpoint. We've found this to be of real advantage in terms of life of a given saw.

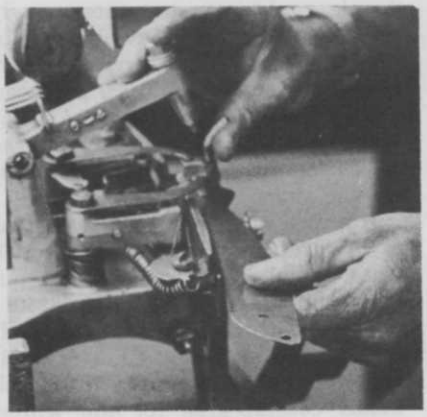
That's about all there is to sharpening pruning saws. Note the difference between the dull, disjointed blade in the beginning and the same blade when sharpened. Quite a difference! The sharp saw has uniformity between teeth and exhibits a keen edge that will cut quickly and true.

One special tip on saw sharpening. We've found that if you run a honing stone down the saw blade after you've filed it that the edge will be even sharper when you use it. The honing stone takes off the metal burrs.

Saw sharpening is not difficult. If you're still in doubt about sharpening your saws, consult a professional. □

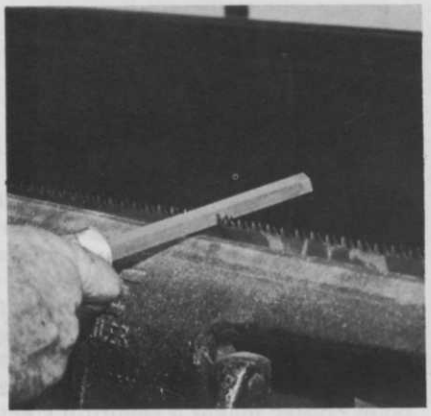


Here's the tools you need to sharpen your own saws: a six-inch Cant saw file, large flat file for jointing, pistol-grip saw set tool, and jointing tool for straight blades.



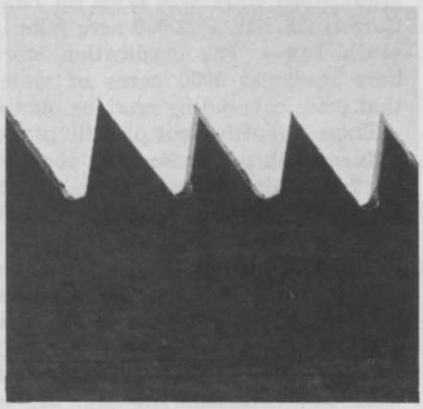
Not all saws have the same set. The average amount is .025 to .030 inches for each tooth. You need more for fibrous wood; less for deadwood.

You can buy a pistol-grip saw setting tool for your saws. Stanley Tools makes an acceptable unit. Set the teeth on one side first and turn saw over.



When you file a saw, you also put a nice bevelled edge on the tooth. Fanno saws are bevelled about 15 degrees; other saws vary.

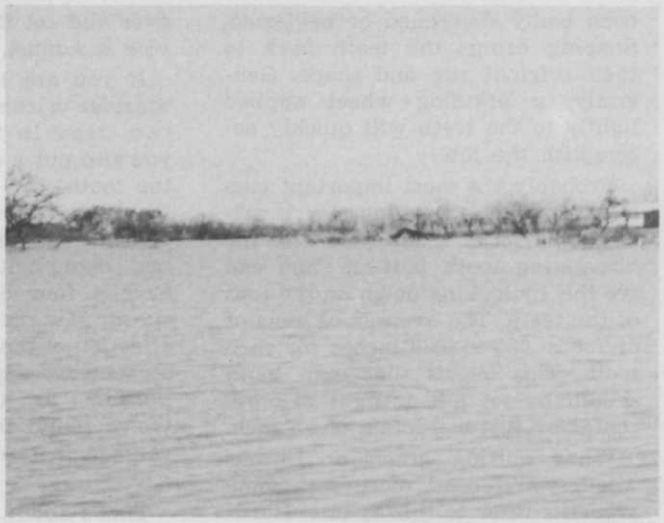
This man has been making and filing saws for 35 years. Note how he holds file. Saw vice holds saw firmly leaving blade exposed.



Here's a freshly sharpened saw. Compare it to the first two pictures. Note the joint, shape, bevel and file. Saw will cut fast in this condition.

A final saw tip. Lay saw on flat surface. Run a honing stone down the saw blade to take off metal burrs. It will put a professional touch to your work.

This is the way Buffalo Cove at Lake Corpus Christi looked prior to treatment. Water Hyacinths are so thick that small boats become entangled.



Following treatment, the same area now appears clear and inviting to area residents and sports fishermen. Applicators used 2,4-D B.E.E. to control the weed.

We Could Have Looked The Other Way

By L. V. GUERRA
Fishery Biologist, Region V
Parks and Wildlife Department
Austin, Texas

WATER HYACINTHS *Eichornnia crassipes* (Mart.) Solms have been present in many Texas lakes since 1935.

This placid looking green plant with "bulb-like" petioles and a blue lavender and orchid-like flower standing majestically on top of the plant cluster makes a beautiful sight to behold. Often times in early summer literally thousands of acres of water turn from green to lavender blue with the profusion of blooms of this foreign entry into our aquatic habitat. In a relatively short time this water environment that was being used for water recreation is no longer useable.

Since March 1970, when the Texas Parks and Wildlife Department of the State of Texas entered into a cooperative contract with the U.S. Corps of Engineers, over 20,000 acres of water hyacinths have been removed from our ever diminishing public lake waters. This removal or destruction was accomplished by using a government approved formulation of 2,4-D B.E.E. (2,4 Dichlorophenoxy-acetic acid, butoxyethanol ester) that has been registered for use in potable waters.

It became necessary that this plant eradication work be done in many public lake areas. Boat traffic was no longer possible. Floating hyacinth mats prevented any type of troutline fishing or skiing. Many good black bass and crappie "fishing hole" areas were now closed by hyacinth plants. Many lakeside home owners could not launch their boats. The plants trans-evaporation processes were reducing the drinking water supply to a precarious level.

The preliminary phase of this eradication work was done on Lake Corpus Christi, a 21,000 acre lake in south Texas. The eradication work here involved 8000 acres of water that were covered by noxious plants.

These beautiful but prolific plants reduced fish populations by competing for available water space, resulting in an over-abundance of small undesirable fish. This in turn led to less use of our precious, diminishing public fishing and recreation water.

These newly opened lake areas with the plants removed and safely settled in the bottom of the lake, were now available for the use of fishermen and other water oriented sports.

Census surveys showed that in this area the average sports fisherman spends an average of $15.50 per day in connection with his fishing pursuits. In this daily cost are included meals, motel, gasoline, and various kinds of refreshments. The newly opened water areas had a fishermen useage potential of 80,000 man-days, which means that 100 people could now use these newly created 8000 acres of available fishing and recreational areas. Fishermen alone spent $1,240,000 per year.

The recreational value of these areas based on 50¢ per day for the 80,000 man-days amounts to $40,000 for the year.

Hunting revenues for these areas is low for there is not too much water fowl hunting activity, but duck hunters did contribute $6250.

The use of the lake and surrounding areas by sight-seers, hikers, bird-watchers who come to this south Texas coastal area for the winter added $10,000 to the local economy.

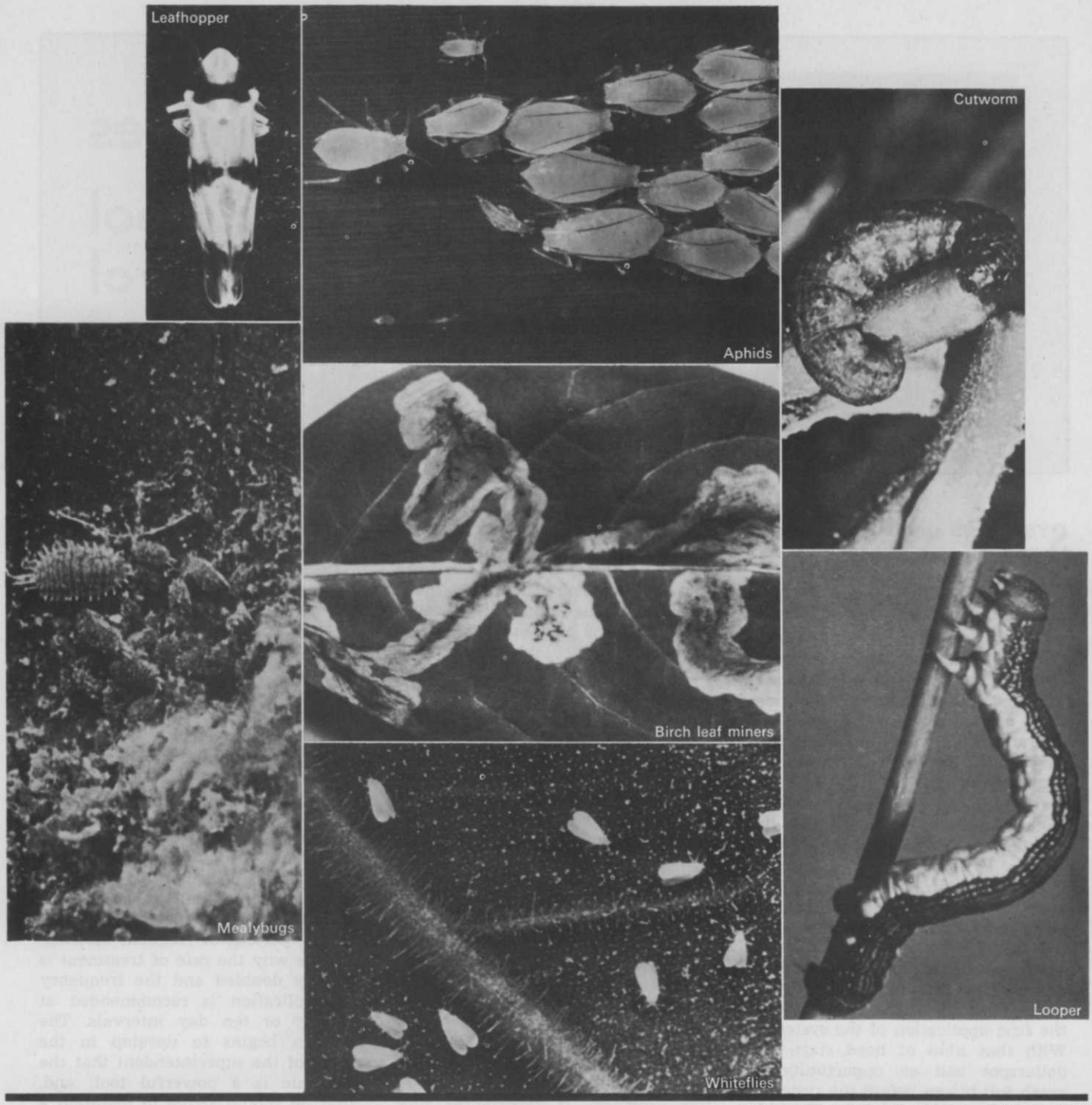
The total recreational value based on 8000 acres amounted to $1,251,000 per year.

State and government personnel engaged in the professional field of plant control and management are often guilty of not taking full credit for all of their work. The satisfaction seems to come from a job well and safely done.

There are other benefits that result as an end product of our efforts to reclaim our lost aquatic environment. Benefits are also accrued to real estate and land values. Plant removal or aquatic environment management is not an easy matter, time and money must be spent to realize our goal.

In the Lake Corpus Christi area the property owners of the 200 miles of shorelines benefited by at least

(continued on page 38)



Ag-Organics Department, Midland, Michigan 48640

Bet you can't name another insecticide that kills as many bugs as Zectran. That's because there's nothing quite like ZECTRAN* insecticide. It's the powerful, general use product that may replace other insecticides you're now using. ZECTRAN insecticide works on almost all major foliage-feeding insects—including hard-to-kill kinds, foliage-feeding worms and caterpillars, even many major turf pests. And more. ZECTRAN insecticide is also effective against slugs and snails. Use ZECTRAN on over 600 different flowers, ground covers, trees, shrubs, house plants and turf. It's biodegradable, easy to apply—in either liquid or powder form. Just remember to read and follow all the directions for use and precautions for safe handling on the product label.

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For More Details Circle (130) on Reply Card

Systemic Fungicides
Powerful Tool In Disease Control

By DR. PAUL SARTORETTO
Technical Director
W. A. Cleary Corporation

SYSTEMICS are expensive. So make sure you are getting your dollar's worth. Use them properly and try to milk all the protection you can get out of them.

Improper use of systemic fungicides has resulted in disgruntled customers and a condemnation of these excellent fungicides. In addition, there are instances of "systemics" tolerant to dollarspot, a disease that has proven to be a pushover for these "systemics."

Of all diseases, the most prevalent and the most easily controlled disease by these "systemics" on golf courses is dollarspot. It is possible that tolerant strains are developing and will become significant, but we must await future developments. In the reported instances of failure to control, investigation of conditions indicate that severe attack of dollarspot was in progress even before the first application of the systemic. With that kind of head start, the dollarspot had an opportunity to reach full bloom before the systemic had a chance to attack it. There is also confusion in the accurate identification of the fungus.

A systemic fungicide is distinguished from contact fungicides because of its ability to also diffuse into the plant to give curative action. This is accomplished not so much through foliar absorption, but mainly by way of soil-root diffusion and thence by transpiration action throughout the grass blade cells. When sufficient systemic works its way into the plant tissues, it immunizes the grass blade against the fungus surface attack.

The process does not happen overnight. As a matter of fact, most of the systemics are incapable of movement or activity until they begin to hydrolyze to soluble active metabolites. Laboratory tests indicate that this chemical procedure is slow, often taking as long as two weeks before even 50 percent of the active metabolite is available. Reports on some "systemics" indicate that more than six weeks are required for 90 percent hydrolysis.

This phenomena should not be construed as a disadvantage or a deterrent to the use of "systemics;" indeed, it can be capitalized upon and converted to the golf superintendent's benefit.

If the golf course superintendent were to draw upon his many years of experience and knowledge of working with slow release organic fertilizers and apply that same concept to "systemics" he can begin to appreciate the necessity for proper timing and use of systemic fungicides.

The "systemic," through both contact protective as well as slow release systemic action, is very much like ureaform. It experiences slow release and long residual. On the other hand, the contact fungicide acts very much like the water soluble fertilizer that is immediately available for activity, and just as sudenly dissipates.

The superintendent has learned by experience that the slow release nitrogen will last for several months, and may take him through the entire summer depending upon the rate of his spring application.

On the other hand, he may elect to supplement his spring feeding with small increments of more ureaform throughout the summer. With a slow release nitrogen he has latitude, whereas with a soluble fertilizer he is confined to a constant demand feeding rate.

Systemic fungicides do not last nearly as long as ureaform, but can be expected to last four to six weeks. However, the repeat application should be applied before the first application is completely dissipated. Therefore it would appear that a substantial application of systemic fungicide in early spring would be in order, followed by a constant release of active metabolite. This is ideal for fairway applications.

Greens, however must be treated differently. Because the green clippings are collected, it is estimated that as much as half of the systemic could be lost via the clippings during periods of frequent mowing. This is why the rate of treatment is usually doubled and the frequency of application is recommended at weekly or ten day intervals. The pattern begins to develop in the mind of the superintendent that the systemic is a powerful tool; and, that he should strive to maintain a release of miniscule amounts in the plant to kill the germinating spore in much the same way that a preemergent herbicide works on the weed seedling.

The success story of systemic fungicides is definitely tied into their role as preventives (fungistatic activity) as well as curative for specific disease organisms. There is still need to leave the role of fungicidal control for non-sensitive organisms up to the powerful, quick acting contact fungicides supplementing the systemic whenever the occasion arises. This should seldom occur if the systemic is applied properly. □

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You'll find Hahn and Ransomes - Hahn earth-care products all over the world. From Brussels to Savannah, you'll see innovative Hahn machines helping men with problems like yours take care of their part of the earth.

Why are more and more people choosing Hahn every year over our fine competition? Well, maybe it's because Hahn has placed its emphasis on developing equipment that saves you money and makes your job a lot easier.

Equipment like our world famous Tournament Triplex Greens Management System that takes care of four back-breaking, time-consuming jobs. Or our self-propelled Flex-a-matic, the most field tested self-propelled gang mower ever introduced.

Hahn manufactures everything from aerifiers to vacuums to power drags to the most sophisticated mowing machines available. In fact, whatever your need in caring for your part of the earth . . . Hahn has an earth-care product that will make your job easier.

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The 3 growing divisions of HAHN, INC.
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world-wide distribution

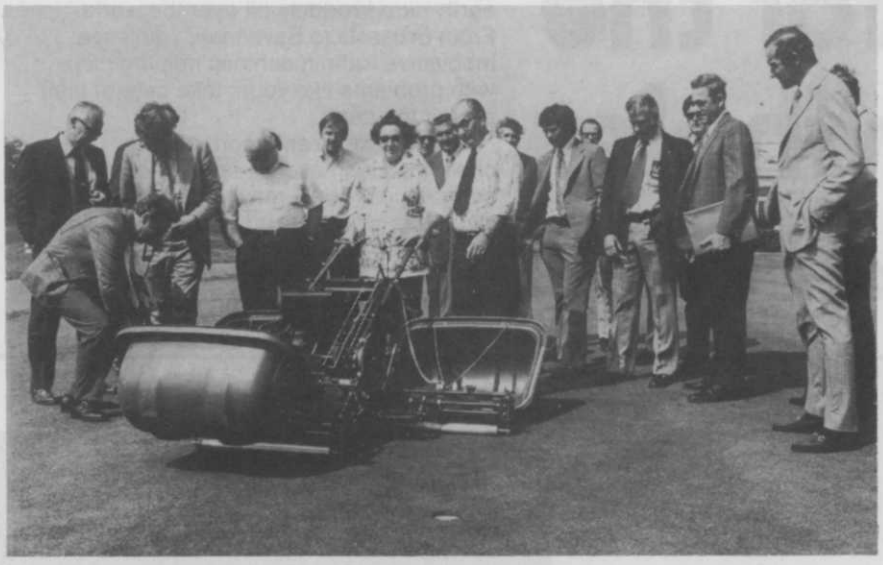
For More Details Circle (112) on Reply Card

Mr. Toro, the highest award the company can confer on one of its distributors goes to Ben G. Reemelin (l) Zaun Equipment, Jacksonville, Fla. E. S. (Duke) Newton, Jr. (r) Zaun's VP and gen. mgr. helps receive the award presented by David T. McLaughlin, Toro's president. Presentation was made at the company's annual distributors convention.

Green Industry Newsmakers

PEOPLE PLACES EVENTS

Ted Collins' Tree and Landscape Service has piggybacked a message on the rear of 25 regional transit service buses in Victor, N.Y., a suburb of Rochester. The buses are used exclusively for suburban, and park and ride service. Collins calls them "taillight spectaculars." There's three messages, all color coded. The Collins logo is on the left so it can be seen by passing cars. This is a followup to a 1972 campaign where he bought every bus card inside and out on a selected suburban route.



The scene: Pleasant Valley Country Club, Sutton, Mass. The purpose: demonstration of new production models of Maxi II and Greensmower. The people: They are Locke Mfg. dealers from the New England area who were guests for the day. Results: A seminar that will be repeated across the country. Dealers were impressed by the new features of these units.

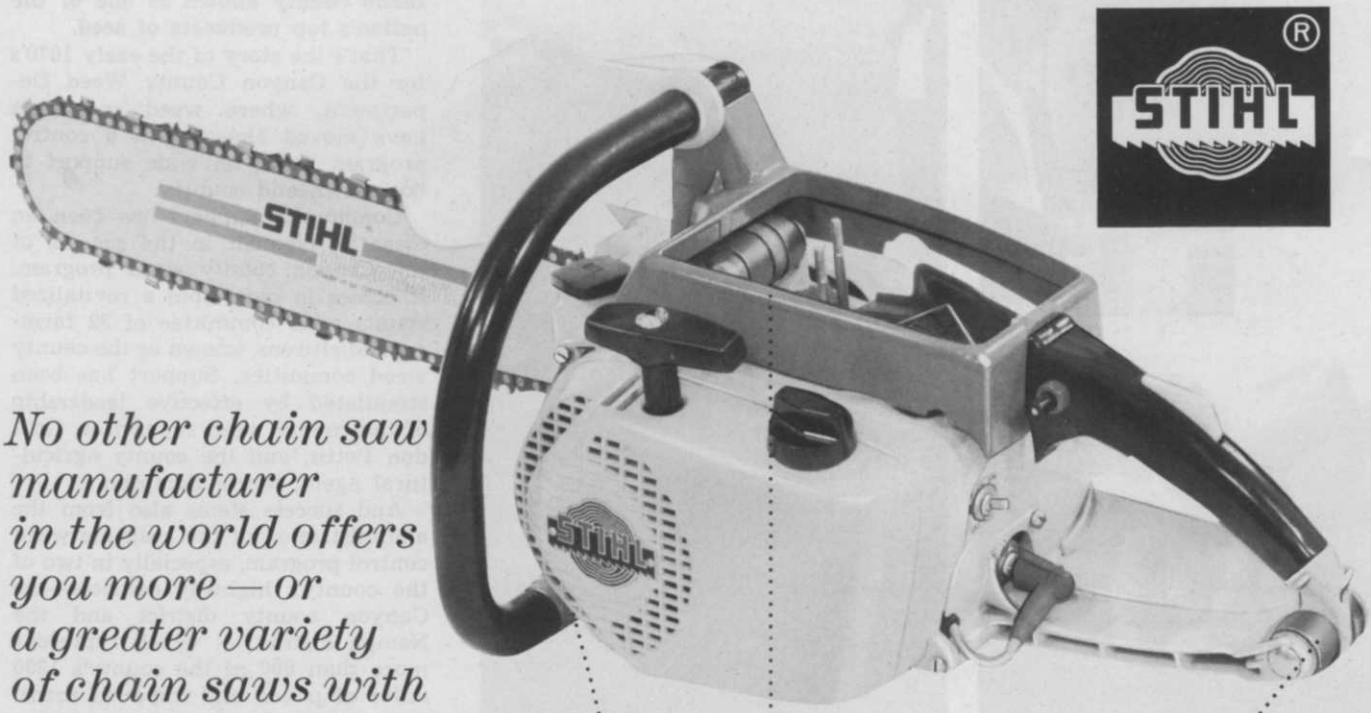
What caused this vertical split of tree bark? Lightning. Davy Tree Expert Company officials say that positive lightning protection for trees is totally practical and not injurious to the tree. It's not a do-it-yourself project, though. Remind your customers that this job calls for professional tree care service. It's a shocking experience to tamper with electricity.

Here's a growing market for the custom applicator. It's injection fumigation, and it is considered more effective for nematode control than the older drench method. Nematicide is injected into turf at a depth of three to five inches using a coulter and shank unit. This custom applicator is using Fumazone. Dow Chemical Company estimates that the cost of treatment, chemicals and custom application, is about $50 per acre.

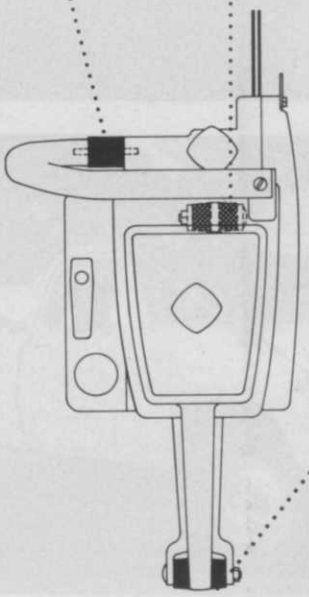
When you want accurate facts

about anti-vibration systems & about eliminating vibration in chain saws...

Ask the people who gave it to you first and who know it best! STIHL!



No other chain saw manufacturer in the world offers you more — or a greater variety of chain saws with AV anti-vibration systems.



STIHL was the first chain saw company in the world to introduce and manufacture an AV anti-vibration system on their saws – as far back as 1964 – and it has proven so reliable and popular with professional cutters, that we have had to make the AV system available in just about every saw in our line.

Our exclusive and patented AV anti-vibration system (as shown) consists of strategically positioned rubber shock absorbers mounted in the handles and body of the saw. They serve to practically eliminate vibrations from chain and engine and let you cut longer, with less effort and fatigue, and without unnecessary discomfort to your hands, arms and back.

STIHL American, Inc.
107 Bauer Drive, Oakland, N.J. 07436,
Area Code 201-337-0211

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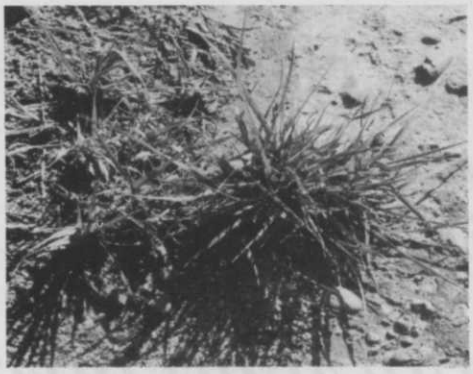

Budgets Up Weeds Out In Idaho

NEW STANDARDS of roadside weed control are evident in an Idaho county known as one of the nation's top producers of seed.

That's the story of the early 1970's for the Canyon County Weed Department, where weed specialists have moved ahead with a control program based on wide support in both town and country.

Community support has been an essential element in the success of the Canyon county weed program. It comes in part from a revitalized county-wide committee of 32 farmers and citizens, known as the county weed committee. Support has been stimulated by effective leadership of the county weed supervisor, Gordon Pettis, and the county agricultural agent, Merle Sampson.

And success stems also from the administration of the roadside weed control program, especially in two of the county's highway districts—the Canyon county district and the Nampa district — which represent more than 800 of the county's 1300 miles of paved and unpaved roads. Here the involvement of road maintenance supervisors such as J. E. Howsmom and Floyd Davenport has been critical.

Behind the scenes, yet basic to the program, has been two years of trials with a variety of weed treatments and the decision to build the Canyon county roadside weed program around fall application of

(continued on page 32)

(upper left) Gordon Pettis, county weed supervisor, has directed the program since 1970. He relies on company representatives such as Jim Ellis of Du Pont (midddle left) to provide technical information. Road Maintenance Supervisor Floyd Davenport (lower left) of Nampa district coordinates programs. One of the big problem weeds is saltgrass (upper right). Krovar I was used in the background (middle right) and the foreground is the check. Chemicals are applied with spray trucks (lower right) which have two booms and a 300 gallon tank.

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Meet the sure-footed track star that goes where wheeled vehicles fear to tread.

Through muck and mud, slop and slime – you can't stop the Brush Cutter.

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Diesel powered. With rubber-belted tracks reinforced by steel cables for strength. And a toboggan-type watertight chassis.

Up front, two rugged rotary mowers clear an 8-foot swath through the underbrush. All clearly visible from the centre-mounted cab.

Before your next job gets bogged down, give Brush Cutter the business. Contact your local Bombardier distributor.

BOMBARDIER®

Muskeg® Brush Cutter

BOMBARDIER LIMITED
Industrial Division, Valcourt, P.Q. Canada

For More Details Circle (139) on Reply Card

These leaves have decomposed into highly desirable organic matter. Enzymes developed by Judd Ringer Corp. break down cellulose and hemicellulose in the leaves. Shredder above pulverizes the humus.

Gold Mine In Disguise

IF YOU THINK black gold is a term reserved for crude oil, you'd better think twice. It's now being used in conversations about leaves.

That's right. Leaves!

Since the environmental concern on pollution produced the ban on burning, leaf collection and disposal in small towns to major cities has entered the big time on most public works department's budgets. Landfill sites are being squeezed to capacity with leaves. In some cities, public works officials have been forced to find additional sites for disposal. As one official wryly commented, "Everybody wants trees and leaves in the spring and summer, but nobody wants the leaves when they fall."

Skip Burkhardt of Lakeshore Equipment & Supply, Cleveland, examines the compost of leaves that's only a few weeks old.

That problem can be licked, however. Leaves can be turned into black gold quickly and successfully, with minimum work and minimum investment. It's being done in Hennepin county, Minnesota and Maplewood, New Jersey, and this fall the Washington Park Horticulture Education Center in Cleveland plans to make black gold on it's property.

In early August, the Washington Park Center, which is part of the Cleveland Public Schools issued an all-points bulletin to the city and surrounding suburbs for leaves. The idea of someone actually wanting leaves is so radically different that more than 80 people attended a conference at the center to discover the reason why.

Their game plan is built around the need of the center for top quality fill — on the order of 200,000 to 250,000 yards — to bring about 56 acres of ground up to grade and up to useable condition. The technique involves leaves and a unique new culture which quickly and efficiently turns leaves into valuable compost — black gold.

Composting is not new. Man has been composting plant wastes for a long time. The environmentalists and the organic enthusiasts have capitalized on this idea. But few, if any, have been able to make composting work on a massive scale. That is until recently.

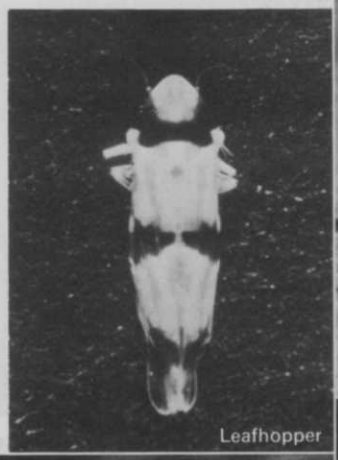
Judd Ringer Corporation of Eden Prairie, Minn. has developed a batch of enzymes which can break down almost any plant waste in short order, efficiently and effectively. The enzymes can turn a pile of leaves six feet tall, eight feet wide at the base and of infinite length into valuable black gold in the space of a few months. When combined with dirt, the resulting mixture of dirt and organic matter becomes highly touted for use in lawns, gardens, potting soils and as top quality fill at the Washington Park Horiculture Education Center.

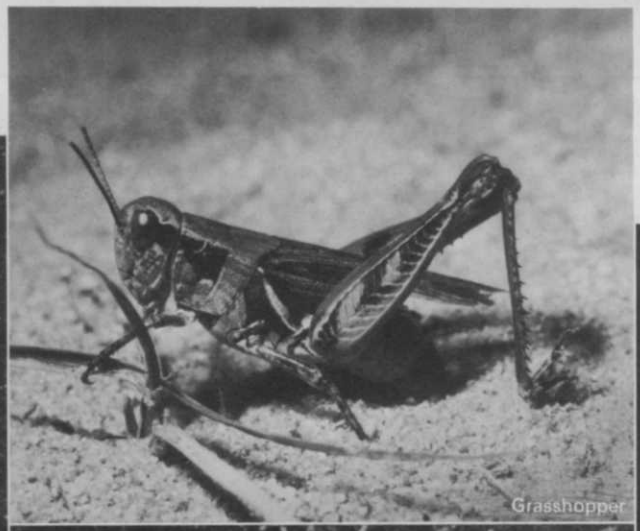
The enzymes basically throw Nature's natural method of decomposing into high gear. They speed up the action of the bacteria which attack cellulose and hemicellulose in the leaves and hasten the job of decomposing. There's nothing different about the enzymes. They are all found naturally. The only difference is that the enzymes have been hybridized.

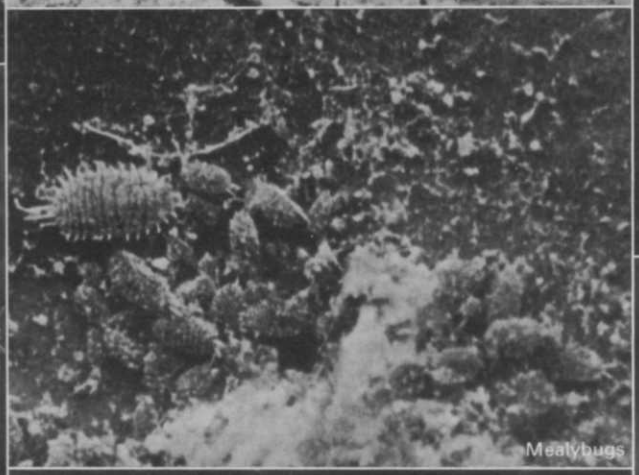
There are four steps to success, says Don Lovness of Judd Ringer, efficient collection, planned deposition, uniform innoculation and adequate aeration. He points out that timing of leaf collection is highly important. Newly fallen leaves that are high in carbohydrates (energy)

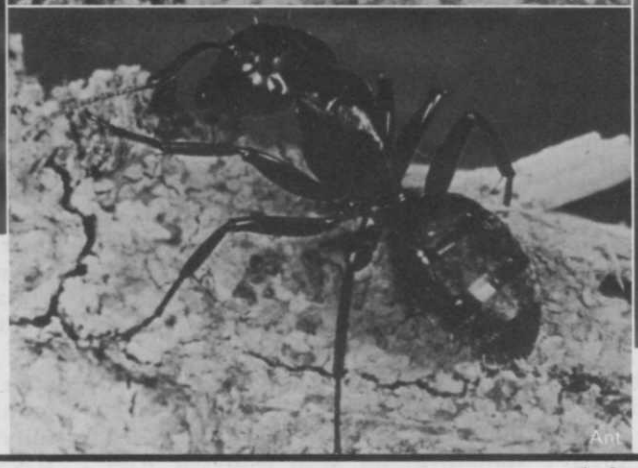
(continued on page 36)

Compost material here will be used as top soil fill for the Washington Park Center in Cleveland.









Ag-Organics Department, Midland, Michigan 48640

These are only seven of the turf and ornamental pests Dursban controls. If we had more space, we could show you another seven. Like sod webworms, brown dog ticks, earwigs and Hyperodes weevils in turf. Or ornamental plant pests like mites, spittlebugs, exposed thrips, white flies and many more. But our point is, DURSBAN* insecticide is the choice of professional lawn spraymen when they need to get the job done. DURSBAN insecticide is effective on a wide variety of insects—including resistant strains. And it's effective in a wide variety of applications. It's economical because a little goes a long way. It's non-phytotoxic, and it is biodegradable. So, if you haven't tried it yet, it's about time you did. Just remember to read the directions for use and follow the precautions for safe handling on the product label.

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For More Details Circle (131) on Reply Card

The two trees on the left were treated with 200 ppm of Maintain CF 125. The tree on the right was not treated. Note difference in foliage density and height.

Area to the left of this Montreal substation was treated with growth retardant. Note how tall the grass on the right (untreated) is on the right.

Chemical Governor For Nature's Time Clock

MORPHACTINS are a class of space-age compounds that have the reverse effect on Nature's fast moving time machine. They are used to s-l-o-w down plant growth.

Once an area is established, turfgrass managers, superintendents and others generally don the maintenance cap. Whether it is mowing, pruning, or some other form of maintenance, labor must be expended to keep green areas in optimum condition. Morphactins help reduce the maintenance load for the manager.

How? Chlorflurenol, a morphactin under the trade name of Maintain CF 125, has been successfully used to control turfgrass growth. It is absorbed by the leaves and readily translocated with a distinct systemic effect. In a test conducted in Atlanta, grassy areas which had been sprayed once were mowed only twice in a season, compare to five times per season in earlier years.

Nursery plants have been sprayed with Maintain to retard terminal growth. Tree care firms use Maintain A, an asphalt paint formulation, to paint pruning cuts and retard the growth of suckers which may result.

Regulating Nature's growth clock has given managers a new tool in the operation of their business. This is particularly true in maintaining turfgrass on highways. Interstates and tollways, as well as many state highways, are now constructed with large grassy medians. Generally mowing crews find mowing these medians much to their disliking because of the potential accident factor.

Managers in many states are currently spraying the median with Maintain just after the first mowing. Turfgrass growth is retarded until much later in the season. On one median in Pennsylvania, the area did not need mowing again until just before Labor Day. This represented a savings in mowing costs, and a positive safety program besides.

Tests in the laboratory have now revealed another interesting development. The most effective growth inhibition has been achieved with a combination of chlorflurenol and maleic hydrazide. A distinct synergistic action is present by mixing these two materials.

The combination treatment: 1. interfers with the development of early growth stages of grasses, keeping the vegetative growth short and inhibiting the development of seed heads; 2. the active material translocates to the growing points of the grass and primarily retards the top growth, thus leaving the root system vigorous for a healthy turf. 3. keeps turf green for an extended period of time. 4. controls unwanted annual grasses and broadleaved weeds in the turf, thus improving the turf appearance and making moisture and nutrients available which would otherwise be utilized by undesirable weeds.

It has also been determined that the combination gives consistent season-long control of a broad spectrum of broadleaved weeds.

U.S. Borax, manufacturers of the product, are now looking at data from tests conducted since 1967 on vines, shrubs and trees. Based on their information, the company has recommended Maintain CF 125 as a plant growth retardant in woody plants and vines.

A foliage spray should be made after a flush of growth or after pruning when the new leaves have fully developed says J. G. Bower of U.S. Borax. Spraying at this time will ensure the desired density, size and shape. Otherwise, tender new growth may curl or twist. Flowering species treated before bud expansion may have a blossom reduction.

Applications generally regulate woody plants by inhibiting terminal growth that develops after treatment. In general, retardation holds for two months (on rapidly growing and frequently trimmed hedges), to six months on vines such as Algerian Ivy, or a year or more on deciduous hardwoods.

Confers, junipers and other in the Gymnosperm family must be treated before buds expand in order to prevent distortion of new growth,

(continued on page 52)

Davey comes equipped for Fall, so you don't have to be.

Fall and Winter are particularly good times to put Davey Tree's custom-built trucks, aerial basket units, hydraulic cranes, power saws, brush chippers, and other high-production tools to work on your grounds.

Our carefully trained crews and experienced supervisors know how to use this specialized equipment efficiently and safely. They'll help you get a lot done while parks, golf courses, and other civic and recreational areas are less crowded.

Even on dormant trees, they know how to prune deadwood and open up vistas. They'll remove dangerous trees. And now is the best time to plant new trees, too.

Use the "off-season" months to catch up on some of the jobs you can't get done during busy Summer months. Or use our men and machines to help you get a head start on spring work.

Check the Yellow Pages for the Davey representative nearest you. He'll be happy to give you estimates without obligation on Fall and Winter work. He's fully equipped and ready to start right now.

DAVEY TREE

KENT, OHIO 44240
Coast to Coast and Canada

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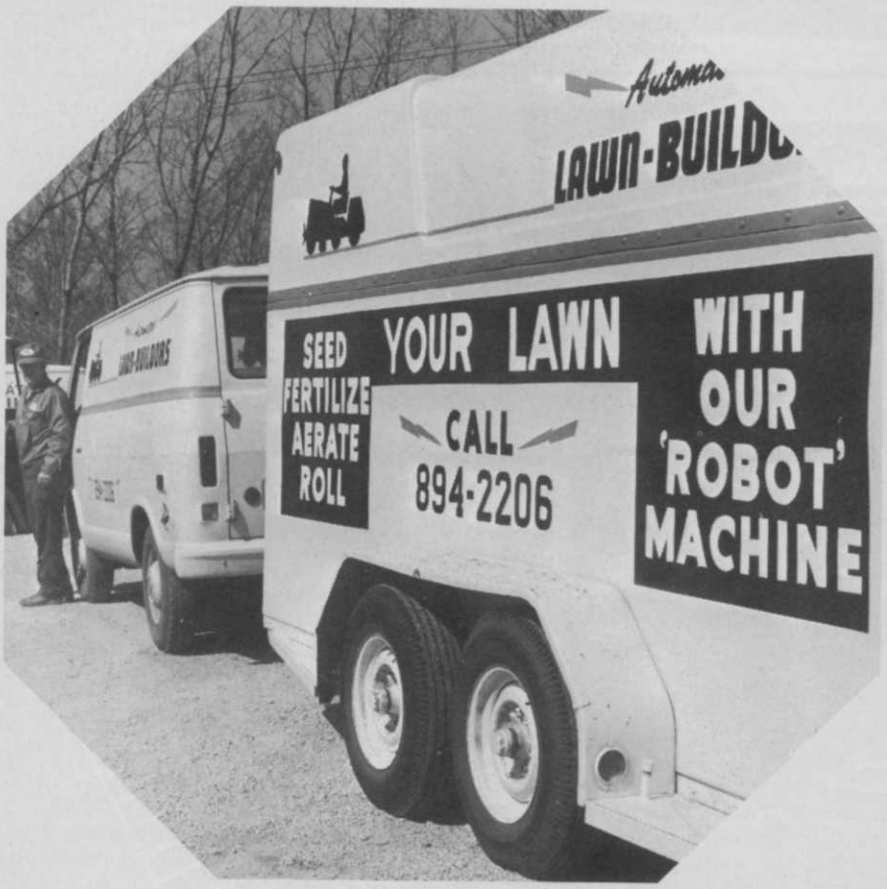

Lewis E. Coleman, of Automated Lawn-Builders, Inc. checks out equipment prior to a job. He's contracted 14 million feet of lawn this year.

Home Lawn Care Boom In Chicago

BUILDING ATTRACTIVE, healthy lawns takes more than water and a fertilizer spreader!

Many homeowners around Chicago apparently are learning that lawn care isn't as easy as they thought it was, and that's why Lewis E. Coleman, general manager of Automated Lawn-Buildors, Inc., of Roselle, Illinois, says his company is finding a steadily growing market throughout the Chicago area and its outlying suburbs.

"If the homeowner is after a good looking lawn," he says, "they're finding they often can't do it themselves. Or they just don't have the time to devote to it or the equipment.

"And since we can offer these services at a reasonable price to the homeowner, more and more of them are letting us take care of their whole lawn, doing everything except watering and mowing."

A complete lawn service package is a primary feature of the Automated Lawn-Buildor program, with varied programs for spring, late spring, summer and fall. Cost to homeowners is only three cents a square foot for the complete package of insecticide treatment, fertilization, dethatching, reseeding, aerification fungus control and spot weed control, due to the unique patent pending automated combine.

The complete program includes four regular visits; the first in the spring includes such items as seeding, fertilizing, crabgrass and spot weed control, aerating and a service recheck. Other programs include features needed at different times of the year; fungicide in late spring as well as grub proofing and further weed control. Fall application includes more reseeding, weed control and fertilization.

"As the service has expanded, we've found with the right kind of machinery, insecticide, fertilizer, seed and so on, we can offer the program economically, without having to finance reworking and call backs ahead of time, because we don't have very many," Coleman points out.

"But it took quite a while to develop the program we're using now. We tried other insecticides before settling on Diazinon as the most effective for this area, for example. We've followed the same prices with other inputs for good lawn care," he adds.

An extensive advertising program has been a major tool in getting the young company rolling. Dennis D. Paige, president of the corporation, handles advertising duties himself, including extensive newspaper advertising in both daily Chicago papers and suburban papers.

The suburban papers have probably been more valuable to our business than the major dailies in the area," Coleman says, "since they reach the people who make up the majority of our prospective customers."

Another advertising tool was a tabloid newspaper size, four-page bulletin on Automated Lawn-Buildor services. The bulletin even included a year-round "Guide to Better Lawns" for "do-it-yourself homeowners."

Concluding the "do-it-yourself" section is the comment, "If it sounds like work—it is. There's an easier way," etc.

Advertising and good results have gone a long way toward building the business, Coleman points out.

"When we have a customer, we mail a short letter to neighbors, mentioning whose lawn we're taking care of so they can be sure to take note of it. Often this technique has resulted in a number of new customers," he adds.

Developing the right chemical, fertilizer and seed formulas took quite a bit of time, Coleman concedes. "And we're still trying new programs as we hear about them," he adds.

"But for now we're pretty well settled, using Diazinon for chinch bugs and most other insects, Daconil fungicide, and Sylvex 2,4-D for weed control. Fertilizer and seeds vary at times, but the seed mixtures have been developed for this area through work with the University of Illinois," he adds.

With a crew of five scheduled for this summer's work, Automated Lawn-Buildor anticipates a good year. Roughly 14 million square feet of lawn has been contracted for 1973, Coleman says, almost double previous years with the sale of two new franchises.

"Not bad for only five years of work," Coleman concludes. □

The effect of fertilization rate and frequency on the establishment of St. Augustinegrass was discussed.

Delegates showed much interest in Floratam, a new variety of St. Augustinegrass.

Texas Turf Field Day Draws Over 150 People

Blue skies, warm weather and a record-breaking attendance of over 150 persons was the story behind the June 27 Turf Field Day held at Texas A&M University.

The Field Day was sponsored by the Texas Agricultural Experiment Station and the Texas A&M University's Soil and Crop Sciences Department and featured a tour of the turf research plots and the renovation of the campus golf course.

Dr. Richard Duble of the experiment station discussed research on bentgrass management. Penncross bentgrass has been outstanding in comparison with Seaside, Emerald and several vegetative selections, he said. Management practices examined included fertilization, aerification, top-dressing and disease control. Two experimental bentgrass greens of 5000 and 8000 sq. ft. constructed according to USGA specifications are being utilized for this research.

Other topics discussed included thatch control in bermudagrass, golf green construction, weed control and St. Augustinegrass establishment and maintenance.

The final session of the program consisted of a tour of the renovation and construction of the campus golf course. The golf course has been completely renovated and redesigned according to the instruction of Jack Burke, Jr., golf professional, Champion's Golf Club, Houston, Texas. Burke has volunteered his services to this entire project and plans call for a fall opening date for the new facility. □

First best, we'll admit, is a good soaking rain. But an underground system using Certain-teed PVC pipe comes in second to nothing else.

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Phone your dealer soon and let him prove it on your own turf.

We keep getting better at our business to get more of your business.

And keep it.

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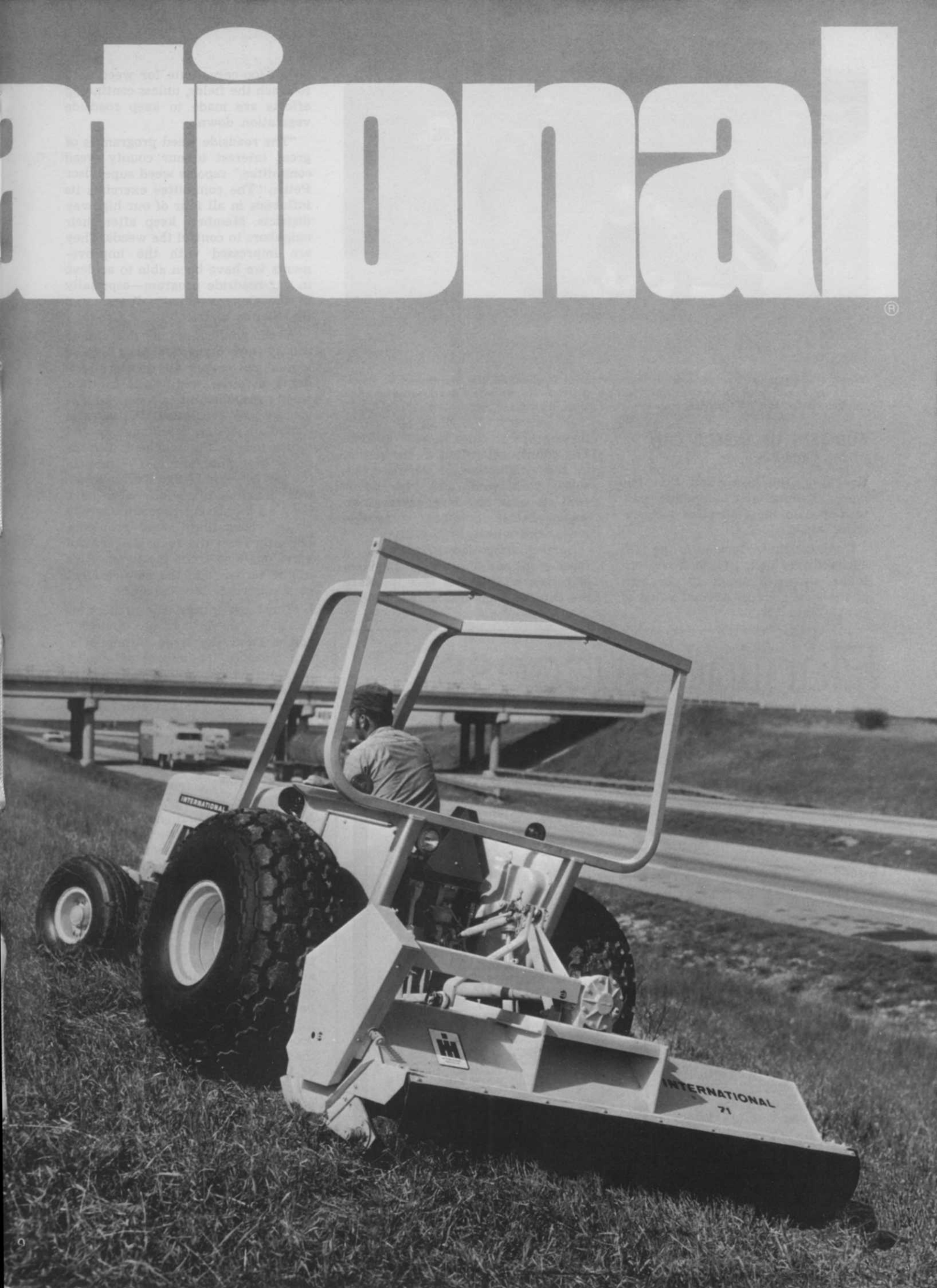


Weed treatment at bridge over irrigation canal is checked six months after treatment by Supervisor Davenport of Nampa district. He handles road maintenance programs in one of Canyon county's four road districts.

BUDGETS UP WEEDS OUT

(from page 22)

Krovar I, the compound that has been yielding new economic performance in the control of troublesome weeds.

Canyon county, located in the rich agricultural belt of southwestern Idaho, produces about 10 per cent of the state's crops. Annual value of these crops is close to $100 million. The county rates first in the nation in the production of alfalfa seed, sweet corn seed, and red clover seed. It also has large acreage in sugar beets, potatoes, vegetable seeds, and wheat.

Surface irrigation is essential to these crops and depends on a system of canals and ditches that interlace the county roads and could provide an all-too-easy route for weed seed to reach the fields, unless continuing efforts are made to keep roadside vegetation down.

"The roadside weed program is of great interest to our county weed committee," reports weed supervisor Pettis. "The committee exercises its influence in all four of our highway districts. Members keep after their neighbors to control the weeds. They are impressed with the improvements we have been able to achieve in our roadside program—especially in the Canyon county district and the Nampa district."

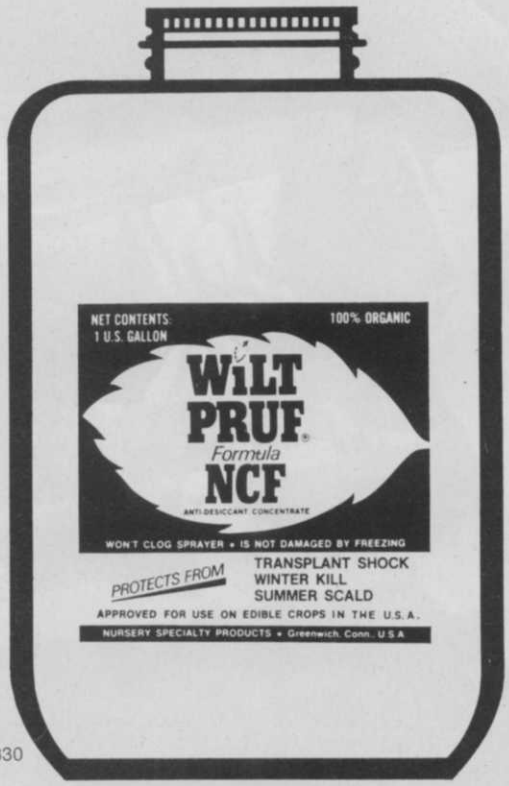
Weed challenges in this Idaho county are numerous and involve annual newspaper ads to alert residents in cities and towns to their weed responsibilities. As far as species are concerned, Pettis rates Canadian thistle, morningglory and white top as the toughest. But he notes that puncturevine — new in the last 10 years — and Kochia weed, salt grass and sandbur also have been an increasing problem. Gordon Pettis views these weed problems, not only from the roadside point of view but also from the perspective of the farmer and the new resident of a suburban development.

"Our most enthusiastic support for roadside weed control obviously comes from the large farmer who can measure the impact of a good program on his yields," says Pettis. "One of our big needs is to generate understanding about weeds among those who build or occupy new homes in the developments. Roadside control is important to everyone."

Back in 1969 a trial program was initiated in Canyon county to determine when and how to treat roadside areas most effectively to get maximum weed control on an economic basis. The first year a series of plots were put down, involving atrazine, Hyvar X, simazine, Tordon, and dinitro — with rates ranging from two to 10 pounds per acre and applications being made in eight-foot bands along roadside areas of a half-mile to six or eight miles. At the time, Hyvar X was being used as the standard treatment for the bulk of the roadside weed program. Treatments were made in the fall of 1969 and in the spring of 1970.

A second year of trials was initiated in the fall of 1970 with treatments that involved Hyvar X, simazine, Karmex, and Tandex. By this time, Pettis had determined that fall treatments looked best, because they had received moisture needed to activate the chemicals. Spring and

Planting success all year round!



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summer rains in the area are variable.

These 1970 trials were again made at various rates. And while a treatment of Hyvar X at four pounds and simazine at two pounds went down on more than 100 miles of roadside, another tank mix of Hyvar X bromacil and Karmex diuron (four pounds each) showed the ability to provide lasting control of the broadest spectrum of weeds.

In 1971 supervisor Pettis settled on the newly available compound, Krovar I, which included both bromacil and diuron. The treatments were made at a seven-pound-per-acre rate to clean up and control a variety of weed problems on more than 180 miles of Canyon county highway district roads. All treatments were made in October and November and showed the ability to control weed growth for months following application.

In 1972, Krovar I was used at two rates — seven-pounds-per-acre and four-pound-per-acre. The heavier rate went on areas receiving an initial treatment of a residual compound; the lighter rate was used for retreatment areas.

The planning team for weed control in Canyon county includes Merle Sampson, (l) county agricultural agent; Gordon Pettis, (middle) county weed supervisor; and J. E. Howsmom, road maintenance spervisor.

The Canyon county trials have established some interesting comparisons in roadside weed costs which apply at least for this intermountain area. In 1970, the combination of four pounds of Hyvar X and two pounds of simazine represented about $59 per mile including application; this was the most widely used treatment. But in 1972 the cost of the initial seven-pound rate of Krovar I was about $46 per mile and the four-pound retreatment rate was down to about $29 per mile, both including application.

"We have boosted the number of miles covered under our roadside program," says Pettis. "And we have done it for less cost. In 1970, for example, we spent more than $13,000

(continued on page 35)

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—insect report—

TURF INSECTS

BLUEGRASS BILLBUG
(Sphenophorus Parvulus)

NEBRASKA: Damaged lawns in Douglas and Lancaster Counties. One Douglas County area averaged 30 larvae, one adult, and 5 eggs per square foot of sod. IDAHO: Heavy in many lawns in Canyon and Payette Counties.

BANKS GRASS MITE
(Sphenophorus parvulus)

OKLAHOMA: Heavy in Custer County Bermudagrass lawns.

INSECTS OF ORNAMENTALS

DOUGLAS FIR TUSSOCK MOTH
(Hemerocampa pseudotsugata)

NEW MEXICO: Light to heavy populations damaged ornamental plantings of Douglas fir, white fir, and blue and Engelmann spruces in 4-square mile area at Los Alamos, Los Alamos County. Defoliation evident, treatment required.

ARMORED SCALE
(Fiorinia externa)

PENNSYLVANIA: Crawlers taken on Canadian hemlock at Wharton Township, Fayette County. Heavy, caused yellowing of foliage on six to 8-inch diameter trees in an ornamental planting. This is a new county record.

TREE INSECTS

NANTUCKET PINE TIP MOTH
(Rhyacionia frustrana)

ARKANSAS: Second-generation infestations heavier than normal; damaged pines, especially in Camden area of Ouachita County.

LARGE ASPEN TORTRIX
(Choristoneura conflictana)

MICHIGAN: Heavy over most of Upper Peninsula. Damage ranged moderate to severe. Heaviest populations occurred in southwest Marquette, Dickinson, and eastern Iron Counties. Development complete, egg stage present. NEW HAMPSHIRE: Defoliated roadside aspen trees in Coos County.

ASPEN BLOTCHMINER
(Lithocolletis tremuloidiella)

MICHIGAN: Larvae about half grown; blotched mines still small. Populations seem heavy again this year.

ASIATIC OAK WEEVIL
(Cyrtepistomus castaneus)

KENTUCKY: Collected in Washington County. This is a new county record.

COOLEY SPRUCE GALL APHID
(Adelges cooleyi)

IDAHO: Alates emerged from this seasons galls on spruce trees in Bannock and Bonneville Counties.

PERIODICAL CICADA
(Magicicada septendecim)

WISCONSIN: Adults reported to have died out. Flagging of oak twigs noted in most areas where heavy adult populations occurred. Heavy flagging noted on both sides of Wisconsin River in Grant and Crawford Counties. Adults very numerous and damaging in Richland County apple orchard. Controls attempted at this site.

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. . . job-test any one of The Diggin' Dutchman's tough, compact, multi-purpose machines from Vermeer. It's the world's most complete line, built to last, built by hard-working, skilled craftsmen who have made Vermeer the big name in underground installation equipment and backed by a nationwide network of sales and service facilities. There's a Vermeer machine to fit your job requirements . . . your power specifications . . . your attachment needs . . . your equipment budget. Write The Diggin' Dutchman or, better yet, call him (515/628-3141) NOW for a FREE demonstration of any Vermeer machine. Vermeer Manufacturing Company, 7209 New Sharon Road, Pella, Iowa 50219.

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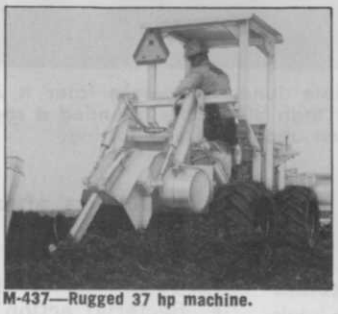
M-437—Rugged 37 hp machine.

M-147H— "Easy Ridin' " 14 hp unit.

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VERMEER TRENCHER-PLOW DIVISION

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BUDGETS UP WEEDS OUT

(from page 33)

to treat 225 miles of roadside. In 1972 we spent less than $8,000 and treated 255 miles. Yet we got control that was better. We're getting a lot of good reaction to the program from the farmers."

This Idaho weed program on paved roads really starts when new roads are planned. In recent years about 15 to 20 miles of roads per year have been built in the Canyon county highway district and almost as many in the adjacent Nampa district. Shoulders and pits are built to provide good drainage, but they are also planned so a single chemical treatment can provide long-lasting weed control without erosion — thus minimizing the need for costly roadside mowing. As a result, mowing has been all but eliminated in county roadside maintenance. Last year, for example, it involved just one man in Pettis' nine-man crew for the equivalent of a few weeks.

"Our objective in our program for unpaved roads has been a clean borrow pit," says Pettis. "One problem on paved roads, of course, is salt grass and other weeds that germinate right at the edge of the paving or oil. And we all know that some weeds come right through asphalt. That's why we have worked so hard to build understanding with our maintenance supervisors. A good weed program does rest on well-planned roads and on teamwork between those who build and maintain the roads and those who control weeds.

Three-hundred gallon spray rigs mounted on a pick-up truck with an eight-foot boom and an auxiliary hose are standard equipment in both the Canyon county district and Nampa district. Two trucks are used for roadside spraying in the fall in both these districts. In the summer they switch to control programs on noxious weeds. But economies have been established. Puncture vine formerly involved four or five treatments with 2, 4-D. Now a single annual treatment with Krovar I will control it. As a consequence of this and other improvements, the county weed department operates only five spray rigs instead of nine. Yet it still handles a wide range of weed programs — roads, (in the Canyon county district) and railroads, shopping centers, vacant lots, etc. (throughout the county).

The weed department spray rigs can apply either an eight-foot or a twelve-foot wide pattern. They are handled by skilled operators who have other jobs in seasons when spraying is not scheduled. Pettis, a former farmer himself, knows the importance of weed know-how and care in herbicide application and he has a crew of experienced men working with him in the country weed program.

"Weed control is a job for specialists," agrees road maintenance supervisor Floyd Davenport of the Nampa district. "We have lots of people in the county who welcome our spray program because it helps keep weeds out of fence lines and out of ditches bordering the fields. They know that our spray crews do a real job; that's one reason we find some of the farmers moving their crop lines right out to the edge of the road."

Impact of the area's weed control can be judged best by the men who have been using the new compound. Spray operator Tommy Didge in the Nampa district says he's been looking for sandbur — one of the district's tough weeds — but hadn't seen any on roadsides by early June, following last fall's treatment. Maintenance supervisor Davenport looks for added reductions in mowing this season.

Road maintenance budgets are up in Canyon County, but weed control costs are being kept down. "It's a matter of better planning, better training of our spray operators, and better weed compounds," sums up Floyd Davenport. "We've got better control of the weed problem than we have ever had." □

Ackley Distributor To Cover Rhode Island And Mass.

Goodall and Sons Tractor Company has been named distributor for Ackley hydraulic tools for Rhode Island and Massachusetts. The announcement was made by Harry Goodall of Goodall and Sons Tractor Company and Harold DePue, Ackley's vice-president of marketing. The Ackley line includes hydraulic hand tools for utility, construction, marine, agriculture, governmental and industrial use.

This grass was innoculated in late June. Six weeks later it is almost entirely broken down into compost. More than 80 people attended a conference in Cleveland to find out added information about leaf composting.

GOLD MINE

(from page 24)

work best. That means leaf collection crews must be on the scene to pick up leaves and drop them off at the deposition site in minimum time. The reason is that the bacteria need the energy stored in the leaf to efficiently do their work. There's nothing worse than a pile of leaves that is many weeks old, says Lovness. You can't use them, and nobody wants them.

He recommends that front-end loaders be specially equipped with many tines to aid in leaf collection. Leaves swept into streets by homeowners can be pushed to a collection area by leaf catcher blades mounted on trucks or by loaders.

Once at the deposition site leaves are dumped in long windrows. Each row is then innoculated with enzymes. One-half pound of innoculate at $1.25 per pound is needed per ton of leaves. (A ton of leaves is about four yards in size.) Uniform innoculation is stressed. A water truck, preferably one with a centrifugal pump, then waters the leaves down. The leaves are allowed to stand for about 10 days, after which they are turned once.

During this time, temperatures in the pile will climb to 150-160 degrees F. Bacterial action is working and much of the oxygen is being used in breaking down leaf structure into organic matter or humus. Turning the pile after 10 days puts more oxygen into the system and permits the hard working bacteria to complete their job. Within a week, the height of the pile can be reduced by a third, notes Lovness.

Site preparation is important, too. Lovness says that too much water or air are toxins to the organisms which break down the material. The site at the center in Cleveland has been considered a highly suitable location.

Doesn't decomposing vegetative matter cause objectionable odor? Judd Ringer Corporation says, "Smells from compost are the result of faulty construction." A carefully construction compost pile will fall well within the health and sanitation code of major cities.

There is little threat of spontaneous combustion with this system of composting. First, internal temperatures never reach the point where fire would result. And, Lovness says that spontaneous combustion is a reaction of volitality of various organic oils, not necessarily considered in the decomposition process.

Inside the pile, it is quite moist. The nature of leaf cells is to collect water. Newly fallen leaves are relaively high in water content. The action of the enzymes on the bacteria causes the cells to break down and release water.

When all decomposition is stopped, the black gold is ready for use. Lovness advises that best results are obtained when the compost is shredded. A shredder such as that manufactured by Lindig Mfg. Corp., Royer Foundry & Machine, Ford, Deere, W-W Grinder, Red Cross Company and others will pulverize the humus and make it workable. Combined with soil, the mixture becomes a valuable asset.

Where can you buy the enzymes? Besides the Judd Ringer Corporation of Eden Prairie, Minn., distribution includes: The Cumming Co., Inc. 531 South Avenue, Garwood, N.J.; Trius, Inc. 369 Duffy Avenue, Hicksville, N.Y.; Lakeshore Equipment and Supply Co., 10237 Berea Road, Cleveland, Ohio; The Clapper Co., 1121 Washington Street, West Newton, Mass.; and Niagara Chemicals, 1274 Plains Road E., Burlington, Ontario, Canada.

The Cleveland Public Schools system is looking forward to leaf drop this fall. Their plans are to start a massive composting "factory" as soon as the first truckload of leaves arrives. Other communities around the country may well consider this method a positive step forward to solve the problem of leaf deposition once and forever. Leaves can be a virtual gold mine in disguise.□

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EDITORIAL

(from page 6)

ioned by other employees. Neither should they be given more job responsibility just because management feels the crunch on employee hiring. Likewise, keeping the man glued to his present job without legitimate room for development and expansion will quickly cause creative death.

The talented employee needs encouragement from management in the way of company security, benefits, salary increases, bonuses, job evaluation and recognized responsibilities. Like the child who grows into a man, this indivdual must be nutured by management and gven opportunities commensurate with exhibited abilities.

industry people on the move

JON TREIBLY, JACK McCLENAHAN and STAN HILDRETH have been appointed ProTurf technical representatives for O. M. Scott & Sons. They will be located in Mississippi-Alabama, Virginia and Florida's gulf coast, respectively.

* * *

WILLIAM B. GRAHAM III becomes sales planning manager, consumer goods, for Massey-Ferguson. He formerly was with Bombardier.

* * *

JEFFREY L. LEFTON, a Purdue University graduate, has joined the faculty of the Agricultural Technical Institute, a part of Ohio State University's college of agriculture.

* * *

ROBERT E. LANDESMAN, appointed director of marketing for the irrigation division of the Toro Company. He replaces **DAVID W. GOOD** who resigned to become a Toro distributor in the southwest.

* * *

H. J. BOATWRIGHT, JR., becomes marketing manager, industrial chemicals & plant foods for U.S. Borax. He was formerly product manager. In other company moves, **DR. JOSEPH G. BOWER** was appointed product manager, industrial chemicals and **DR. TERENCE G. ALSTON** moves to assistant marketing manager.

* * *

JOHN R. MITCHELL to assistant product manager of agricultural chemicals for the agricultural and sanitary chemicals department of Rohm and Haas Company. He will be responsible for developing sales programs around the company's agrichemical line of products.

* * *

RICHARD J. VENN, SR. named manager of distributor sales for the outdoor power equipment division of FMC Corporation. He will supervise the distributor area sales force, develop merchandising programs and establish policies and procedures to distributors of Bolens equipment.

* * *

HUGH STEAVENSON, elected to serve on the board of directors of the American Association of Nurserymen. He is currently president and owner of Forrest Keeling Nursery, Elsberry, Mo.

* * *

ED LARGE, named manager, marketing communications of OMC-Lincoln, a division of Outboard Marine Corporation. He succeeds **JAMES L. LEVENTHAL** who will become product manager of golf and turf vehicles.

* * *

HOWARD L. McPHERSON, appointed director of operations for two additional FMC plants, one in Canada and the other in Holland. He is currently vice president of manufacturing for the municipal & industrial service equipment division of FMC Corporation.

* * *

ROBERT A. HUIZINGA and HARMON R. LAVIGNE have joined Thompson Hayward Chemical Company as agricultural sales representatives. Huizinga will be working out of the Yakima distribution center and Lavigne will be located in Baton Rouge. **RALPH D. RIPLEY,** also T-H, has been promoted to regional manager of the north central region. He was previously branch manager in Minneapolis.

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An exclusive six-sided disposable bed knife with 50% more life expectancy than competitive four-edged blades.

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For More Details Circle (116) on Reply Card

Shoreline areas such as this owned by the Miller Ranch were solid with Water Hyacinths. It was like a floating carpet to view. Fish populations were reduced.

Even though it is somewhat marshy, the same area takes on a different view after treatment. Estimated benefits are on increase of $100 per acre after spraying

WE COULD HAVE LOOKED

(from page 16)

$100 per acre. On the assumption of 160 acres of shoreline, to the lakeside or shoreline miles, this would have a total benefit of $3,200,000 for a one year period. The land values have now appreciated at a higher rate. Lakeside owners no longer have to clean their water front lots, they can now utilize their boat docks, move about freely all over the lake without fear of not being able to return back home at the end of a day's fishing. The above figure is on the conservative side as many lakeside homes and property lots have increased in value two to three times their original cost.

The conservation of water is rarely considered as a monetary asset. One acre of water hyacinth plants removed in this watershed saves 11.5 acre-feet of water every year. Strong is the ability of the plant's root system to pick up water and carry it to the leaves for evaporation by the warmth and light of the sun. The removal of 8000 acres of water hyacinths have preserved for human useage 92,000 acre-feet of water. The water saved from trans-evaporation is enough to furnish 20,000 gallons of water per month to 108,900 homes for one year. On a monetary basis this would be saving $5,445,000 per year. Assuming water transportation, treatment and purification to

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is the most accurate fertilizer spreader you can use.

Right behind the spreader. . .or 20 feet to each side. . . your turf gets the same amount of fertilizer if you use a Vicon. Field tests have proven it.

Vicon uses an exclusive system. . .a spout oscillating at 540 times per minute. This gives a rectangular coverage pattern that eliminates the overlapping and missed spots you get with fan spreaders.

Vicon is quality constructed to last for years. Major parts are non-corroding polyester and stainless steel. Application rate is easily adjusted from 10 to 2500 pounds per acre.

Even lime is no problem for the Vicon. It handles lime, fertilizer, seed and chemicals. Six hopper capacities from 600 to 7000 pounds suit your course and budget.

Vicon has the accuracy that professional turf men are looking for. Write today.

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For More Details Circle (103) on Reply Card

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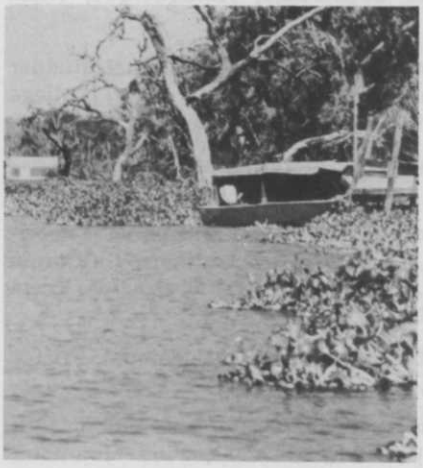
For More Details Circle (104) on Reply Card

be 75% of cost this would still be a savings of $1,361,125 per year.

The benefits accrued to just these 8000 acres when summarized amount to a total of $5,817,375 per year for the work that has already been done. Reduced to a per acre basis, the unsuitable water that has been recovered from our last aquatic environment and made available to our fishing and recreational public has a benefit of approximately $727.17 per acre. It must be remembered that benefits usually last several years.

Our efforts must continue to destroy the new plants that come up from seeds and stolons. The plants are very prolific. One plant can recontaminate and occupy 12000 acres of water in a couple of years.

Professional people in weed control work are by necessity very cautious. Application methods are strictly controlled, and are never used used during high winds that could cause "drift" problems to adjoining land. The chemical selected is of the highest quality and purity. The chemical used is one that emulsifies easily, covers and adheres the plant leaves very well, and best of all is rapidly biologically degradeable.



Jones camp below the horseshoe at Lake Corpus Christi takes on a forbidding look prior to treatment.

Our work has earned many compliments and letters of commendation. There have been a few complaints from uninformed people, who complain of our work, our methods, our chemicals, yet they offer no recommendations or constructive suggestions.

While it is easy to look the other way and not see this green menace taking over our aquatic environment, our efforts must continue to keep an unwanted and ever present plant from depriving us of our ever decreasing waterways. We could have looked the other way. □

Greensweep. The little greens sweeper that works as well on pavement as it does on turf.

Tow the Greensweep behind the Ryan Minute-Miser or your turf tractor. It's light. Handles easily. And you won't find it leaving tire tracks on your turf.

There's a strong 3½ horse Tecumseh engine mounted on the Greensweep chassis. It powers an eight-sided fiber brush that picks up debris with a gentle swooosh.

We've run the Greensweep over leaves, thatch, aerating cores, pine needles, dirt, sand, gravel, broken glass, paper, and beer cans, and it thrives on them.

Sweeps a 48 inch wide swath. So clean-up is not only easy, it's fast.

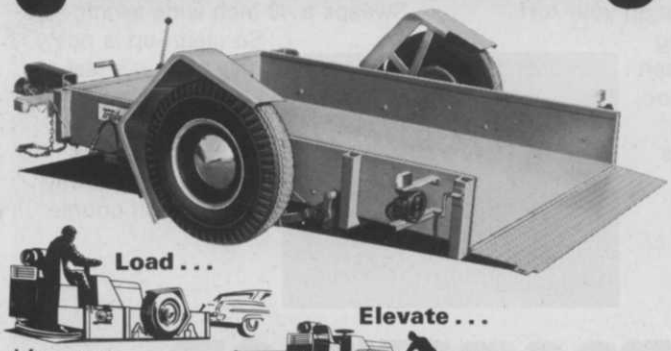
Greensweep. The lightweight power sweeper that's as good on a driveway as on a golf course.

Greensweep the clean-up machine

73-R-2A

For More Details Circle (101) on Reply Card

One Manhandling



It's easy with Trailevator. The hydraulic elevating trailer that lowers to ground level for fast 'roll-aboard' loading—then lifts its own load to hauling position in just seconds Handles loads up to 3,000 lbs.*, lifts and lowers without uncoupling from the towing vehicle. Standard trailer hitch quickly attaches to car, truck or tractor. Try a one-man Trailevator. It'll make you a one-trailer man.

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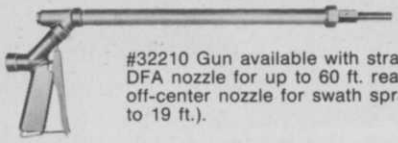
Other Models to 5,000 lbs.* **®TRAILEVATOR

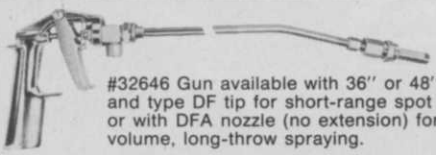
The Hydraulic Elevating Trailer

For More Details Circle (114) on Reply Card

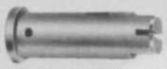
Delavan foam spray equipment reduces drift up to 60%



#32210 Gun available with straight stream DFA nozzle for up to 60 ft. reach, or with off-center nozzle for swath spraying (up to 19 ft.).



#32646 Gun available with 36" or 48" extensions and type DF tip for short-range spot spraying, or with DFA nozzle (no extension) for low volume, long-throw spraying.



Type DF nozzle tip for spray rigs or #32646 gun (above).

Type DFA nozzle for either of the above guns.

Type DFOC off-center nozzle for #32210 gun.

Now, with low-drift Dela-Foam spray products, you can spray with safety on those days of low to moderate winds. Foam spraying also has other advantages to offer. Send for free catalog and price list.

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—meeting dates—

Professional Grounds Management Society, annual meeting, Oglebay Park, Wheeling, West Virginia, Sept. 23-26.

Course for Licensing of Tree Pruners, Agricultural Extension Centre, Brandon, Manitoba, Canada, Oct. 1-5.

American Horticultural Congress, meeting of the American Horticultural Society, New Orleans, Oct. 1-7.

Turfgrass Supplies and Equipment Field Day, New Jersey Golf Course Superintendents Assoc., Montclair Golf Club, West Orange, N.J., Oct. 2.

Society of Municipal Arborists, 9th annual meeting, Sheraton Inn, Flint, Mich., Oct. 3-5.

Tropical Plant Industries Trade Show, sponsored by the Florida Nurserymen and Growers Association, Diplomat Hotel, Hallandale Beach, Fla., Oct. 5-7.

Southwest Turfgrass Conference, Albuquerque, N.M., Oct. 11-12.

Industrial Weed Control Conference, 8th annual, Rudder Convention Center Texas A&M University, College Station, Tex., Oct. 15-17.

Central Plains Turfgrass Conference, Manhattan, Kans., Oct. 17-19.

Turfgrass Equipment & Materials Educational Exposition, 13th annual, sponsored by Southern California Turfgrass Council, Orange County Fairgrounds, Costa Mesa, Calif., Oct. 17-18.

Wisconsin Golf Turf Symposium, eighth annual, Pfister Hotel, Milwaukee, Oct. 24-25.

Southeastern Agricultural Chemicals Association, 19th annual meeting, Callaway Gardens, Pine Mountain, Ga., Oct. 28-30.

Turf and Landscape Irrigation Conference, Northern California Turfgrass Council. Asilomar Conference Center, Pacific Grove, Oct. 28-30.

Michigan Pesticide Association, fall conference, The Olds Plaza, Lansing, Mich., Nov. 7-8.

Washington State Weed Conference, Cosmopolitan Chinook Motel and Tower, Yakima, Wash., Nov. 7-9.

Penn-Del Chapter, International Shade Tree Conference, general meeting, Marriott Motor Hotel, Philadelphia, Pa. Nov. 8.

University of Georgia Turfgrass Short Course, 4th annual GGCSA, Center for Continuing Education, Univ. of Ga., Nov. 12-13.

New Jersey Federation of Shade Tree Commissions, annual meeting, Haddon Hall Hotel, Atlantic City, N.J., Nov. 17-19.

North Central Weed Control Conference, annual meeting, Sheraton-Jefferson Hotel, St. Louis, Mo., Dec. 4-6.

National Agricultural Aviation Association, 7th annual conference, Diplomat Hotel, Hollywood, Fla., Dec. 5-8.

Tennessee Turfgrass Association, annual conference, Roger Millers King of the Road Motor Inn, Nashville, Tenn., Jan. 7-8.

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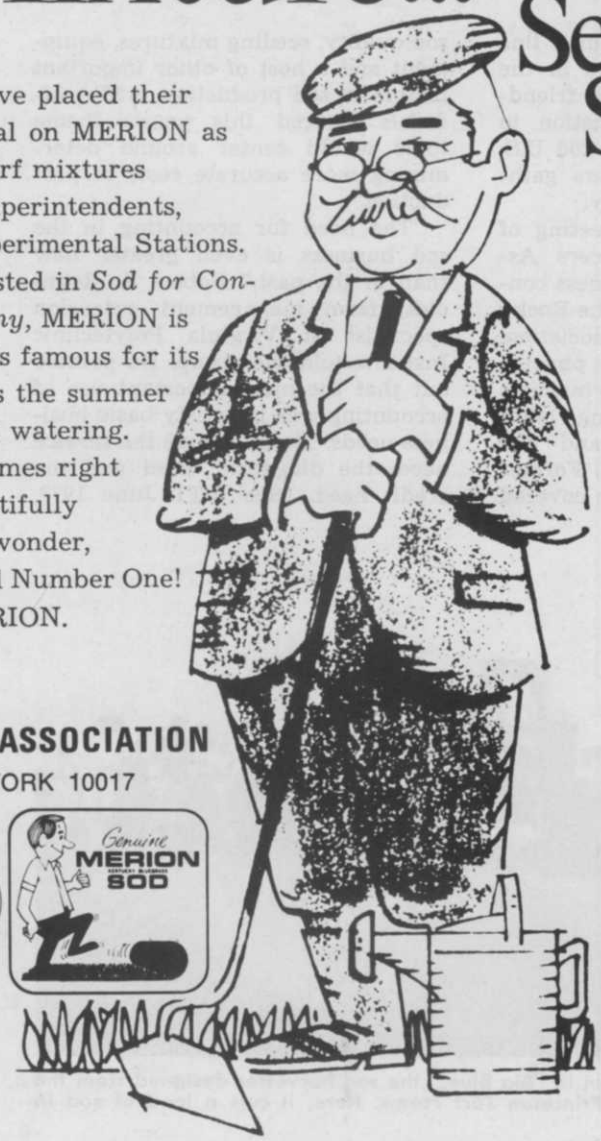
The men who know best have placed their continuing stamp of approval on MERION as a component of improved turf mixtures — Park and Golf Course Superintendents, Scientists, Growers and Experimental Stations. Whether you're more interested in *Sod for Convenience or Seed for Economy,* MERION is your best choice. MERION is famous for its deep green beauty that lasts the summer through with less work and watering. Takes wear and tear and comes right back. MERION blends beautifully with other bluegrasses. No wonder, Seed or Sod, MERION is still Number One! Get growing *now* with MERION.



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For More Details Circle (127) on Reply Card

Delegates gathered at the Scien-Turf-ic Sod Farms, Inc. to see a pivot irrigation system in action. The unit moves 10 feet per minute. This system covered a 35 acre sod field.

Robert K. Reynolds discusses the need to keep accurate accounting records in the sod business.

SOD INDUSTRY SECTION

ASPA Show Of Shows

"Green Side Up," the punch line to the best-known sod joke in the industry, kindled renewed friendships and deepening dedication to the business as more than 200 U.S. and Canadian sod producers gathered in Denver in mid-July.

It was the summer meeting of the American Sod Producers Association. Host for the business conference and field day was the Rocky Mountain Sod Growers Association.

The meeting was strongly punctuated by speeches relating to business management, record keeping, labor problems, seed quality and the threat of nematodes in sod. Former meetings of this group have covered sod quality, seeding mixtures, equipment and a host of other important factors in sod production, ASPA officials figured this year's theme topic would center around determining more accurate costs of production.

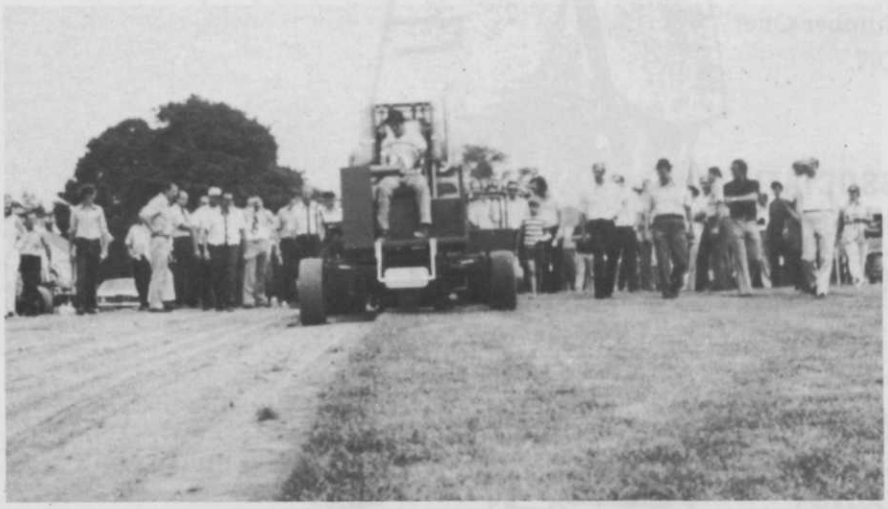
"The need for accounting in the sod business is even greater now than in the past," Robert K. Reynolds, farm management extension specialist at Virginia Polytechnic Institute told the group. He pointed out that the most important use of accounting was to satisfy basic business needs. These include the service need, the diagnostic need and the credit need. (See WTT June 1973, p. 27)

One of the most obvious needs for which sod growers use accounting principles is in completing tax forms, he said. "Many sod growers overpay taxes because they don't keep accurate accounting of income." In small and large operations, a manager can often lower his taxes by shifting income from one tax period to another. This can't be done unless accurate records of income and expenses are available, said Reynolds. The producer today must take advantage of depreciable assets and other ways to reduce tax liability if he intends to make a profit.

The VPI economist then turned to the diagnostic need of accounting. Through a series of handout materials, he conducted the group through a model sod operation and pointed out that the diagnostic need helped the producer locate the ills of the business. He suggested that the ASPA Accounting Manual could be of excellent use in determining the profitability of sod for a grower.

Reynolds concluded his remarks by indicating that accurate records of the business can be used to fill the credit need. He demonstrated that a profit and loss statement was an invaluable tool to the sod producer. It lets the grower list all receipts and expenses and adjustments in inventory to determine the amount of cash generated by the business, he said.

Raymond J. Folkman, Reynolds



There was much interest shown in "Big Blue," the sod harvester designed from the ground up by Wiley Minor, Princeton Turf Farms. Here, it cuts a load of sod in record time.

Nunes Sod Harvester was again demonstrated at this year's show. Built by John Nunes, Patterson, Calif., the unit was driven by son Greg.

This Toro Groundsmaster 72 mows a swath 72 inches wide. Mower height is adjustable front and rear from ½-inch to 6 inches. It was one of several mowers demonstrated by the company during the field day.

and Reynolds Co., Denver, then reviewed the availability of forms for the ASPA Accounting Manual. He also explained some short cuts in accounting procedures as outlined in the manual.

One of the fastest moving, eye-blurring and hard hitting presentations of the day was given by William A. Harding, attorney labor law section, Nelson, Harding, Marchetti, Leonard and Tate, Lincoln, Nebraska. Topic was "Labor Relations Problems Confronting The Sod Industry" and many a sod producer was amazed by the fountain in information which flowed forth.

No company should have to have a union, Harding said. "When you give up, when you don't manage your firm, then you are going to have trouble."

The attorney, who is on a retainer with ASPA, succinctly presented facts about labor unions. "Labor unions in the public's opinion have dropped," he said. "Sixty percent of the people in the country don't like labor unions." Only about 20 percent of the working force are members. This 20 percent has remained stagnant for the past 20 years while the total labor force has grown.

Harding then reported on the various government bodies under which labor unions operate. He said that the jurisdiction of the National Labor Relations Board has been expanded in recent years. Institutions in the past which have not been covered by NLRB can expect to be covered in the future. He pointed out that sod producers may be subjected to pre-hire agreements when installing sod on construction sites controlled by unions.

"Before you sign a pre-hire agreement remember that unions can't do a whole lot for you, but they can do a lot against you," he said.

He then moved to a discussion of Commission (EEOC). "Anybody with 15 or more employees is covered," he said. "The Federal act states that costs in an action are

Dr. Henry W. Indyk (l) receives a commemorative plaque and honorary membership to ASPA from Jack Kidwell, ASPA president.

Honorary ASPA Member

Dr. Henry W. Indyk has served as executive secretary of the American Sod Producers Association for 5 years. Through his wisdom and leadership, the organization has grown from a few members struggling for recognition to a strong and vibrant national group. Indeed, it is international with eight members representing Canada and representation in three other countries.

His faithful devotion to the goals and ideals of this group have won him the highest praise among the organization's members. Because of pressing commitments, he is stepping down as executive secretary of ASPA. During the recent meeting of the membership, he was presented a plaque and made the first honorary member of this organization.

WEEDS TREES AND TURF has enjoyed many beneficial relationships with Dr. Indyk. We wish him all the success in the future and our sincere appreciation for the excellent help he has rendered to the readers of this magazine.

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Model F20 of the Jacobsen turf tractor quickly mowed the demonstration area with ease.

This Parkmaster has nine gangs. All are hydraulically operated by controls easily accessible to the driver.

assessed against you if you lose. You can also be charged with at- the Equal Employment Opportunity torney fees."

Harding's advice to sod producers was to set up an affirmative program and don't discriminate on hiring practices. "If you promote people based on subjective criteria, you're subject to action by minority employees," he said. "You need objective criteria." He recommended strongly that all delegates obtain a copy of the EEOC guide and record requirements.

His discussion then turned to the Occupational Safety and Health Act (OSHA). Any employer who has an employee and is engaged in interstate commerce is subject to OSHA, he said. Initially OSHA was given three years to obtain standards for industry. Currently there are specific standards on the construction and maritime industries.

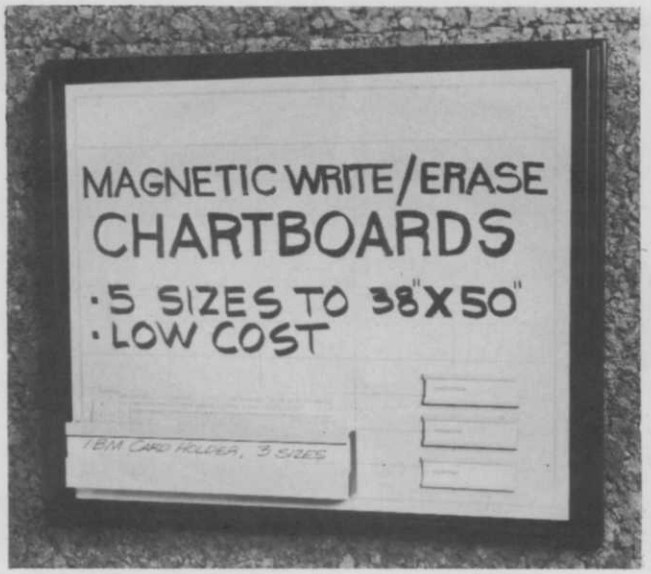
For those in agriculture, there is a special deal, he said. "We haven't seen anything yet." Although the regulations haven't been released for suppliers, Harding cautioned growers that "if anything is unsafe then you are in violation of the act.

"The innocent until proven guilty theory doesn't work with OSHA," he said. "If you are inspected and you receive a report on what you owe, you have 15 days to make an appeal." He cited some of the violations and the fines for the group.

Harding's last topic was the Wage and Hour Law. Basically sod producers who are classified as agriculture enjoy an exemption, he said. But if you have employees who cut

(continued on page 48)

Dr. Jack Butler, extension associate professor-turf, Colorado State University, discusses the results of sod and turf trials at the campus. There was much interest in the new growth inhibitors currently under test.



MAGNETIC CHARTBOARDS:
Spectrum Medical Industries, Inc., Los Angeles, Calif.

Put your company on the board with this easy to use, highly visible magnetic chartboard. It's available in five convenient sizes. Permanently printed grids are covered with a tough Mylar overlay. Grids per chartboard vary from 50 to 450. The Mylar coating accepts writing from crayons, wax pencils, fiber pens with non-permanent ink or even transfer lettering. The steel backing accepts all types of magnets. A long line of accessories makes these boards a versatile item. Ideal for plotting sales growth, budgets, forecasts, maintenance meetings, and many other important items. For more details, circle (701) on the reply card.

SPREADING SCRAPER: Eversman Mfg. Co., Denver, Colo.

Here's a precision spreading scraper that can load and spread six yards of dirt fast. It's operated with regular farm tractors equipped with two control valves. The cutting blade is held at a constant level while the bucket is being rotated to the full dump position. The gate is controlled with a pair of eight inch stroke cylinders. This feature permits the operator to feather out the load to the desired depth through the length of the dump area. Spread cylinders and extend bucket cylinders can be raised or lowered at the touch of a control. For more details, circle (702) on the reply card.

TRASH CONTAINER: Peerless Portable Metal Buildings, Inc., Santa Cruz, Calif.

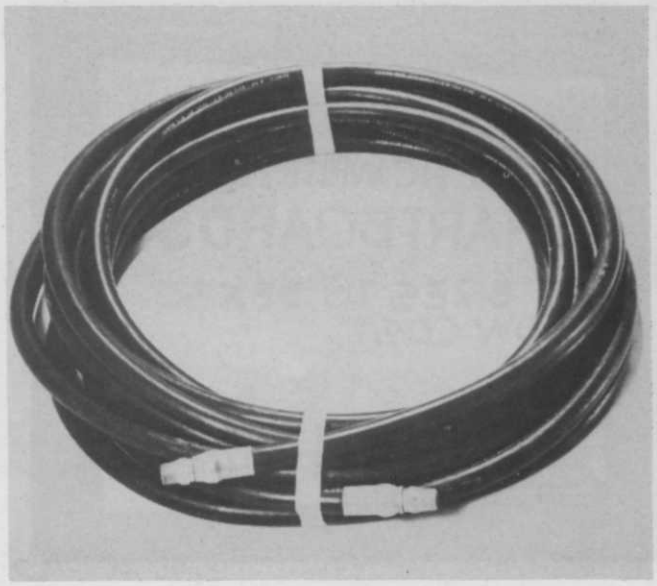
This trash container was designed to keep out the midnight raids of wildlife. Its large, roomy design makes it ideal for use in commercial turfgrass areas as a refuse bin. Each compartment holds the equivalent of a 55 gallon drum. Overall length is 7 feet 8 inches, width is 2 feet, height is 30 inches. Weight is 380 pounds, empty. Construction is 14, 16 and 18 gauge galvanized steel and stainless steel piano hinges. Unit is equipped with skids on the bottom for easy movement from one area to another. Color is Forest Green. For more details, circle (703) on the reply card.

BRUSH CHIPPER: Municipal & Industrial Service Equipment Div., FMC Corporation, Pomona, Calif.

Need a quick way of disposing of trees and limbs. Try this brush chipper which boasts a 318 cu. in. V-8 engine. Rugged, safe feed table completely encloses rotor blade opening when unit is closed and locked. Rear located controls provide operator safety and convenience. A special feature is the exclusive, 6-sided disposable bed knife. Unit is available in standard and off-the-road models, in either 12 inch or 16 inch rotor blades. For more details, circle (704) on the reply card.

PLASTIC FLOW CONTROL VALVE:
Griswold Controls, Santa Ana, Calif.

This automatic flow control valve is based on a unique, patented principal in which a perforated cup moves in response to line pressures. Constant flow is easily maintained. The flow rate is set at the factory by the size of the perforations in the cup, and the strength of the spring that controls the position of the cup. Body of the unit is lightweight corrosion-resistant plastic molded from polyvinyl chloride (PVC) resin. Valve is available with either threaded or solvent-weld end fittings. Factory-set flow rates range from a half gallon per minute up to 150 gallons per minute. Unit is available in six pipe sizes, from ½ inch up to 2 inches. For more details, circle (705) on the reply card.

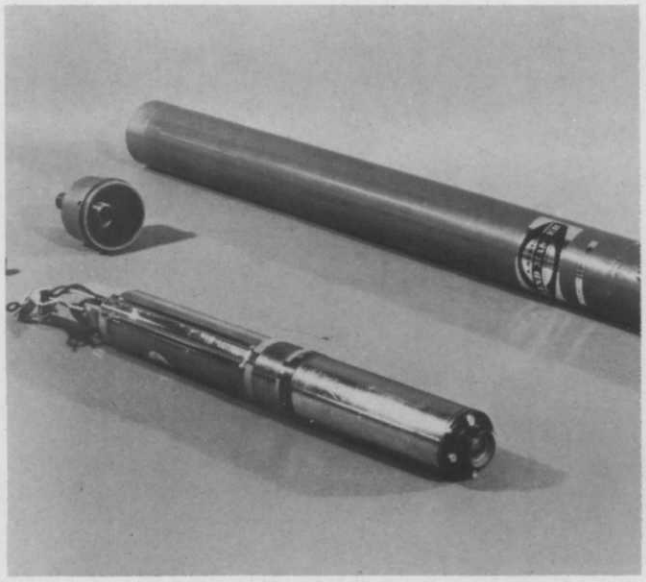


HEAVY DUTY SPRAY HOSE:
American Hose & Reel Co., Marland, Okla.

A wide variety of spraying applications can be done with this type of thermoplastic spray hose. It is light in weight, remains flexible — even in conditions of extreme cold — and its cover won't mark sidewalks or buildings. The core tube and cover are polyvinyl chloride (PVC). It is reinforced with heavy-duty dacron and a thermoplastic cover is resistant to sunlight and weather. Working pressures are from 250 to 1,000 PSI in ID sizes from ¼ to ¾ of an inch. The company also makes hose for liquid fertilizer applications. It is a clear plastic tubing that is easy to check for even application. Working pressure is 75 PSI; average burst pressure is 300 PSI. For more details, circle (706) on the reply card.

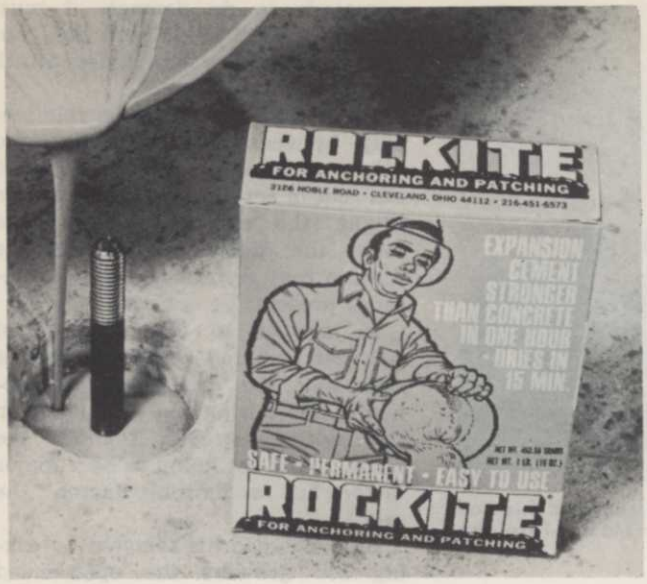
HYDRAULIC POWER WRENCH: Limb-Lopper Co., Inc., Santa Fe Springs, Calif.

Features of this new lightweight impact wrench include a uniquely located reversing valve that is easily operated by a flick of the thumb. The design of the valve reduces clogging and oil leakage. Called Powerench, the unit needs no new power source; it is designed to operate on the hydraulic system of aerial lift, digger and derrick trucks. Models are available for either open or closed systems. Motor generates 10,000 rps and takes four to six gpm at 2500 to 200 PSI. Socket speed is 1100 rpms. Wrench converts easily to a drill by just snapping in the chuck. For more details, circle (707) on the reply card.



SAND AND GRIT SEPARATOR: Laval Separator Corp., Fresno, Calif.

Remove as much as 95 percent of all sand and grit with this submersible separator. It's installed on the suction side of the pump. Unit has no moving parts or screens and requires no maintenance or back flushing. There is no significant reduction of flow with the separator. Pressure drop is less than 10 PSI. Unit can handle flow rates from 5 to 4,100 gallons per minute. For more details, circle (708) on the reply card.

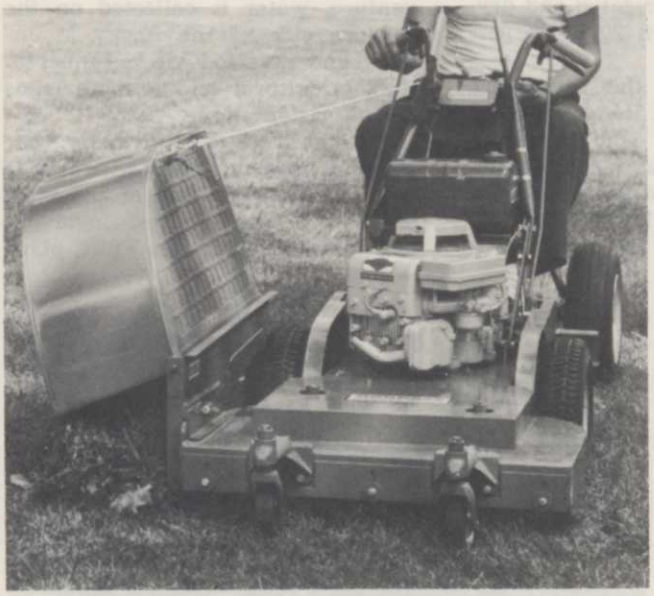


FAST-SETTING EXPANSION CEMENT: Hartline Products Co., Cleveland, Ohio

Called Rockite, this product has double the holding power of fully-cured concrete. It hardens rapidly enough to permit anchoring of studs to heavy machinery in a few hours. Product is mixed with water and poured into place in a semi-fluid state. Its hydraulic-type action causes it to expand slightly as it hardens, locking itself into place. It reaches an initial set in 15 minutes and develops a compression strength of 4,500 psi within one hour. Rockite is packaged in five sizes from one pound to 125 pounds. It may be used inside or out on both vertical and horizontal surfaces. For more details, circle (709) on the reply card.

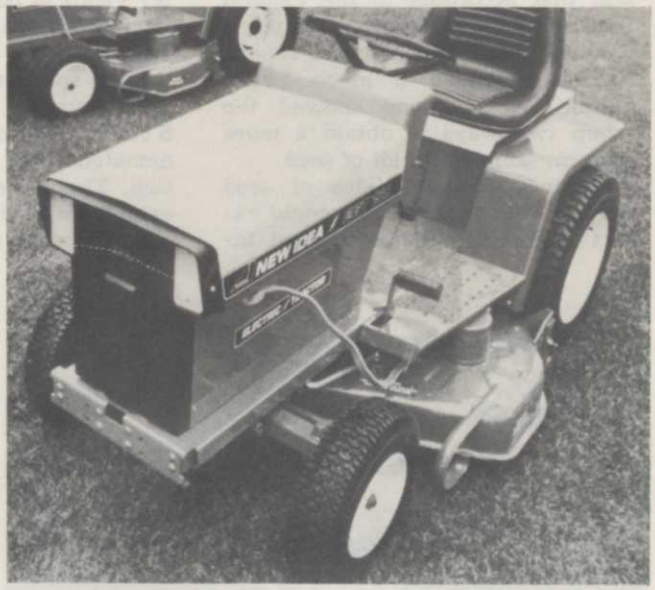
OVERHEAD RACKS: Knaack Manufacturing Co., Crystal Lake, Ill.

If you have extra-long ladders or material to haul by pickup truck consider this new overhead rack. It has two side rails, three crossbars and four legs, all pre-drilled for easy assembly, with bolts furnished. Legs are bolted to the truck bed for maximum stability. In addition, the front crossbar of the overhead rack protects cab roof against damage. Racks are designed for pickup trucks with 8 feet or longer bodies. For more details, circle (710) on the reply card.



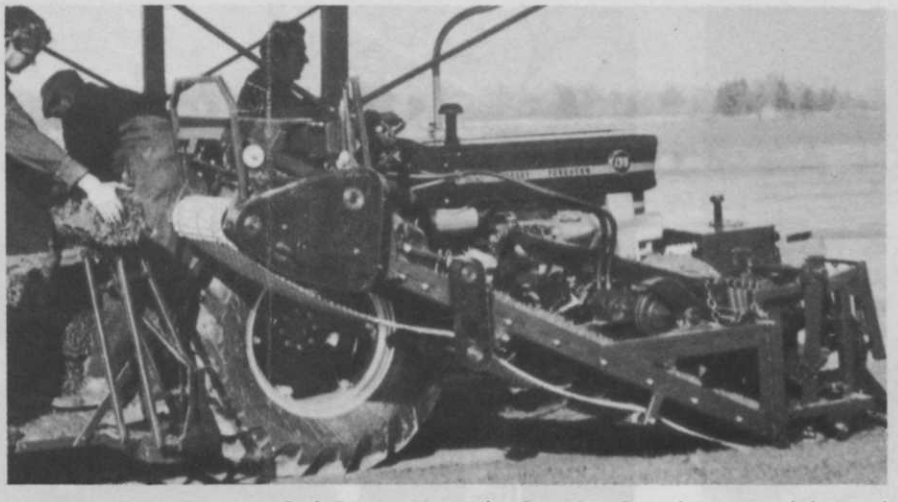
SELF-DUMPING GRASS CATCHER: Goodall Division, Louisville, Ky.

Now you can dump clippings while on the go. This self-propelled mower is equipped with a new grass catcher which can be dumped by operating a control on the handlebar. Operator can dump clippings into windrows for easy removal, or can stop the mower to empty the hopper directly into containers. It is easily installed on the mower without the use of tools. For more details, circle (711) on the reply card.



ELECTRIC TRACTOR: Avco New Idea, Coldwater, Ohio

An electric tractor has the potential for many uses with a commercial turfgrass operation. It can nicely complement the maintenance schedule for electric golf carts and virtually use the same recharging system. This tractor is a 14 horsepower unit that has a variety of attachments as optional features. Standard features include automotive-type disc brakes, a dashboard switch that stops the mower blades in three seconds or less, a seat switch that cuts off tractor and attachment power the moment the operator leaves the seat, and a special return to neutral feature that prevents accidental restarting of tractor until key controls are in neutral position. For more details, circle (712) on the



Jerry Brouwer, Brouwer Sod Farms, Keswick, Ontario, Canada, entered his sod harvester in the field day competition. Unit mounts on a Ford or Massey-Ferguson tractor.

ASPA SOD SHOW

(from page 44)

sod on Monday and Tuesday and lay sod on a construction site on Wednesday and Thursday, then the wage and hour exemption is ruled out. You must pay the minimum wage across the board, he said.

Delegates were then presented a review of seed quality by Paul Florence of Marysville, Ohio. He said that according to the Federal Seed Act only a one gram sample is used to make the standard report. He recommended a much larger sample be used and showed the group two ways to obtain a more uniform sample of a lot of seed.

Florence showed slides of seed size and said that growers could expect a greater savings in seed investment when seed was more uniform in size. He also discussed post harvest dormancy as a factor in establishing a stand of sod.

At the end of his presentation Florence said that seed would be in short supply this year. Seed producers attending the meeting reported yields off 10 to 12 percent in the Willamette Valley, with irrigated seed fields harvesting about normal yields. In the Spokane Valley yields in both irrigated and dryland crops are down 20 to 25 percent.

Last speaker in the conference session was Dr. C. F. Hodges of Iowa State University who discussed nematodes as a threat to sod production. There are a large number of nematodes in the soil which can't attack roots, he said. "In order for a nematode to do damage, it must have a stylet," he pointed out, "but not all nematodes with stylets attack roots."

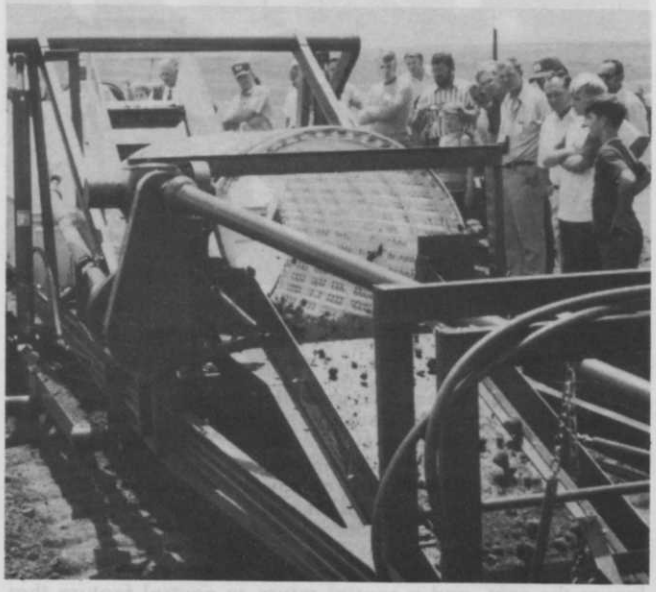
Dr. Hodges reviewed the relationship between plant parasites and other nematodes. He also pointed out that in certain cases of Fusarium blight, the nematode appears to make the disease worse. But the disease may appear without nematodes present, he cautioned.

In answer to the question of whether nematodes are a threat, he said that the probability of economic loss during sod production in the south is greater than in the north. "It is not going to be a major factor but a limiting factor," he said.

He concluded his remarks by asking sod growers the open-ended question of whether they would sell sod that has a known nematode problem.

The second part of the conference consisted of a tour of the turfgrass and sod plots at Colorado State University, Ft. Collins. Delegates enjoyed an interim stop along the route from Denver to Ft. Collins to witness various water resource developments in Larimer county. Considered part of the Big Thompson Project, a Bureau of Reclamation venture, water is collected on the western side of the Rocky Mountains and diverted via a tunnel to the agricultural and grazing lands on the eastern slope.

At Colorado State University, conferees toured sod plots where tests were in progress. One of the most interesting was the test involving turf inhibitors. Dr. Jess Fults, plant



This rock picker demonstrated by Glen Seibold of Cleveland, North Dakota caught the eye of everyone. The drum in the picture rotates to expel dirt from rocks. Rocks are carried to a bin in the rear where they are held until dumped.

Roterra, a power-driven rotary harrow, pulverized dirt into a smooth seedbed. It's made by Lely. Vertical tines in the front of the unit whirl through the soil with an "eggbeater" action. It's mounted on a 3-point system and PTO driven.

physiologist said that Sustar (3M Company) looked particularly promising in inhibiting growth.

The annual business meeting and election of trustees was held at a luncheon at the university student center. Those elected were Paul Florence and Parker Shirling. Jack Kidwell, ASPA president presided at the business session. "This is a dynamic industry and we've got a long way to go," he said. "It takes motivation, education, and many other important factors.

Kidwell challenged those in the meeting to work together to solve the sod industry's problems. "Are you really interested?" he said, "Are you willing to get involved in committee activities, legislative matters and other matters that need to be accomplished."

President Kidwell told the group that because Dr. Henry W. Indyk, was stepping down as executive secretary, ASPA had engaged the services of Robert Geary, Garmo, Inc. "We're hiring a professional management firm," he said. "This will allow us to receive more for our dues dollar and the firm will act as a clearing house for all sorts of things."

New officers of ASPA for the coming year are: (1-r) John Nunes, Nunes Turfgrass Nurseries, Inc., Patterson, Calif., treasurer; Jack L. Kidwell, J.L. Kidwell Landscape Corp., Culpeper, Va., president; Charles Davis, Wharton Turf, Wharton, Tex., vice-president; and Jerry Brouwer, Brouwer Sod Farms, Ltd., Keswick, Ontario, secretary.

Membership chairman Jerry Brouwer, Brouwer Sod Farms, Ltd., Keswick, Ontario informed the delegate body that there was an effort to increase membership. "A person who brings in the most paid members (no less than three members) will receive a one year free membership as an incentive," he said.

Irrigated sod was of interest to many sod producers attending this year's meeting. On the return to Denver, members stopped at the Scien-Turf-ic Sod Farms, Inc. where Don D. Schlup discussed his pivot irrigation system. This was but one of several types used by this producer, but it commanded much

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We'll bet you the hat that you like

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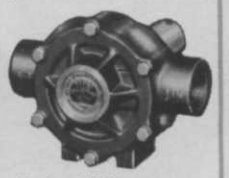

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interest by those in attendance.

The ASPA field day this year was held at Richlawn Turf Farms, a sprawling complex of enterprises owned by Mel Rich that has grown in the past 10 years from 18 acres of sod to 1800 acres. Early in the day sod growers witnessed Richlawn turf installers lay sod in a new housing complex. Then everyone went to the sod field to view the equipment demonstrations.

Glen Seibold of Cleveland, North Dakota showed the group how the Harley landscape power rake and rock picker could improve their production of "rock-free" sod on well-tilled ground.

Three sod harvesters were demonstrated this year. They were the Princeton 4020, a totally new concept in harvesting design, built by Wiley Miner Princeton Manufacturing Co., Heightstown, N. J.; the Brouwer sod harvester, Brouwer Turf Equipment, Keswick, Ontario; and the Nunes sod harvester, built by John Nunes, Patterson, Calif.

Mowing equipment shown at the field day included units manufactured by Toro, Jacobsen and Ransomes.

New officers for the coming year are: Jack L. Kidwell, J. L. Kidwell Landscape Corp., Culpeper, Va., president; Charles Davis, Wharton Turf, Wharton, Tex., vice-president; Jerry Brouwer, Brouwer Sod Farms, Ltd., Keswick, Ontario, Canada, secretary; and John Nunes, Nunes Turfgrass Nurseries, Inc., Patterson, Calif., treasurer. The board of directors includes: Dale Habenicht, H & E Sod Nursery, Inc., Tinley Park, Ill.; George Stewart, Karandrew Turf Farms, Inc., Suffield, Conn.; Tobias Grether, Cal-Turf, Inc., Camarillo, Calif.; William Latta, Princeton Turf of Kansas City, Kansas City, Mo.; John Nunes, Jr., Nunes Turfgrass Nurseries; Wallace Huggett; Gerry Brouwer, Brower Sod Farms, Ltd.; Charles Davis, Wharton Turf; Parker Shirling, Princeton Turf Farms, Centreville, Maryland;; and Paul Florence. □

Tank Mixed Compounds Okayed Says EPA

Can two chemicals each bearing an EPA approved label be tank mixed? Can you apply one compound immediately after the application of another compound?

These and other questions have haunted applicators across the country for many years. Now the Environmental Protection Agency has published guidelines. According to EPA, tank mixes and serial applications fall into one of several categories:

Category 1. Instructions provided for such use on one or more labels of EPA registered products;

Category 2. Such use may be covered by an intra-state registration;

Category 3. Various tank mixes and serial applications have been tested and recommended by agricultural experiment stations, state departments of agriculture or are common agricultural practices.

EPA says that tank mixes or serial applications which are consistent with the label constitute an acceptable use.

Intra-state registrations remain valid until replaced by EPA registrations under Section 3 of the amended FIFRA. This will occur generally after October 21, 1974, and be completed by October 1976, according to the timetable set for the Federal Environmental Pesticide Control Act (FEPCA). Special actions taken by the EPA administrator in the form of orders could reduce this time schedule. For the time being, tank mixes and serial applications registered by a state will not be deemed uses inconsistent with the label.

EPA has said that in passing FEPCA, Congress intended for the Agency to apply the test of reasonability in enforcing misuse provisions. Thus, until FEPCA is fully implemented, tank mixes and serial applications in Category 3 will not be considered inconsistent with the label if:

1. The products in the mix are applied at a dosage rate not to exceed the label instructions for use of any product in the mix used single for the same set of insects on the same crop; and

2. the label on one or more of the products does not explicitly instruct against such mixture.

There's a lot of "iffy" and not assumed risk which EPA cautions applicators to take into account before mixing, however. For instance, EPA says it is okay to mix the compounds, providing efficacy or human and environmental safety data warrants the use. The applicator must also be willing to accept the risk with respect to effects on crops, equipment, applicator safety, environmental effect and tolerance pre-harvest intervals.

In other words, EPA has given permission but not granted approval. It still reserve the right to prohibit the action on a case-by-case basis.

Dacthal® drives 20 annual weeds off the course with one easy swing.

One application early in the spring. That's all it takes. Dacthal preemergence herbicide prevents 20 annual weeds from sprouting all season long. Problem weeds like carpetweed, chickweed, purslane and others. So you can devote time and manpower to more important work.

Dacthal doesn't stop there. It also drives out troublesome crabgrass and *Poa annua*. Hit'em in the spring. And follow through with Dacthal in late summer for control of *Poa annua* and other late-germinating weeds.

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For More Details Circle (123) on Reply Card

Highway median left of sign was mowed six times. Grass on right was mowed once, representing a savings in maintenance costs.

CHEMICAL GOVERNOR

(from page 26)

says Bower. Treatment when candles are tender often causes developing branches to droop.

Like any application of environmental protection chemicals, applicators are cautioned about drift when using Maintain CF 125. Although growth does not cease when sprayed with the product, it's a good idea to minimize drift whenever possible. Applicators are fortunate that the volatility of the active ingredient is nil.

Following three years of marketing, U.S. Borax reports these findings from the field: A golf course eliminated the time of two men trimming trees all summer and put them to other more productive work; Washington National Airport in Washington D.C. treated a dangerously step bank between two levels of the airport and saved the maintenance department five mowings; a power company treated a turf area in November 1970. This area though normally mowed several times a season was not mowed at all in the 1971 growing season; and foliar treatment reduced the cost of pruning in California by $400,000.

Growth retardants as a standard field practice have not as yet realized their full potential, says U.S. Borax. But their use is increasing steadily as institutions gain experience in applying them to solve individual maintenance problems. □

(Excerpts reprinted by permission from Industrial Product News.)

Ohio Sod Producers Hold Field Day And Meeting

At least 100 persons were in attendance at the Ohio Sod Producers Field Day in early August.

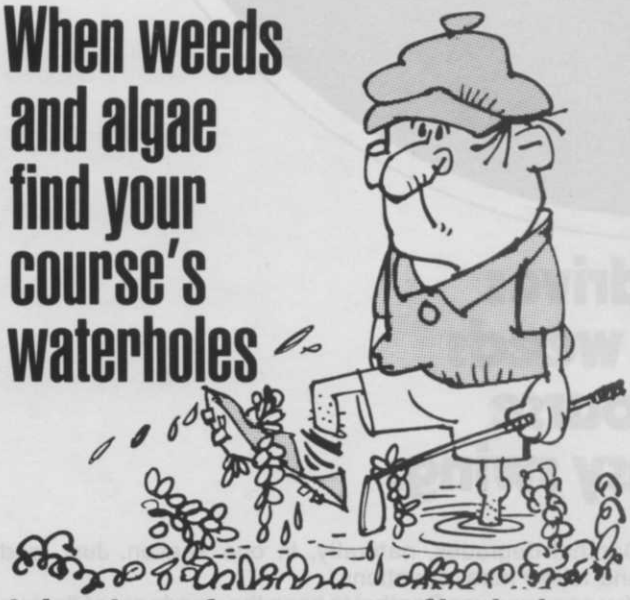
Meeting at Eastside Nursery, Inc., owned by Woodrow Wilson of Canal Winchester, the field day sported event in mowing, spraying and harvesting sod. Delegates crowded around the Princeton Sod Harvester, one of the newest and most uniquely designed machines in the field. It was demonstrated by Sil Schloesser of Princeton Turf Farms.

Greg Nunes, son of John Nunes, Nunes Turfgrass Nurseries, Inc., Patterson, Calif., demonstrated the versatility of the Nunes Sod Harvester to the group. He explained that the machine could harvest sod in either rolls or slab.

Also of much interest during the afternoon was a PTO-driven, 3-point hitch, sprayer manufactured by F. E. Myers. The air blast sprayer can be mounted on a conventional tractor in minimum time.

The summer meeting of the Ohio Sod Producers was held in the even following dinner. Approximately 23

When weeds and algae find your course's waterholes



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were in attendance. Guest speaker was Dr. Dave Martin, extension agronomist at Ohio State University. He reviewed his background and his work with Dr. James Beard at Michigan State University. He will be working with the Ohio Sod Producers in the coming months.

"We're interested in having sod producers participate in various university functions as much as you want," he said. He extended the services of the extension service and the local county agents in helping sod producers solve problems involving environmental protection chemicals.

Paul Florence, Paul Florence Seed and Sod, Marysville, then presented the group with the American Sod Producers Association pamphlet, "Guideline Specifications to Sodding." He said that it could be used by contractors and others in drawing specifications for sodded areas.

He also discussed the accounting system manual for sod producers that members of ASPA are using in their businesses.

Florence reported next on the scarcity of turfgrass seed. He said that this year's seed crop is down considerably over previous years and that producers of sod should be placing orders soon.

Parker Shirling, Princeton Turf Farms, Centreville, Md., extended an invitation to those in the group who are not members of ASPA to join the national group. He also invited everyone to visit Maryland next year for the summer meeting and field day of ASPA.

Ches Augspurger, Cincinnati Turfgrass Nursery and president of the Ohio Sod Producers reminded the group that the next meeting of the organization would be at the Ohio Turfgrass Foundation Conference and Show, November 27-29.

FIEI President Names Emmett Barker Exec. Sec.

Farm and Industrial Equipment Institute president John G. Staiger has announced the appointment of Emmett Barker, 35, as executive secretary and treasurer of the Institute. He succeeds Douglas Hewitt who retired.

FIEI, based in Chicago, is a trade association whose member companies manufacture over 90 per cent of North American farm and industrial equipment—a $5.3 billion industry. Through its members and its communication and cooperation with related organizations and government agencies, FIEI activities encompass all aspects of the industry, including safety and comfort of the operators of its products, promotion of the free world trade concept, engineering standardization for interchangeability of equipment, research, legislative, educational and many other matters.

A 1960 graduate with a bachelor of science degree in agriculture from the University of Tennessee, Mr. Barker has had extensive experience in administration, organizational and program development work, public relations, and advertising and sales promotion.

He has been a consultant in the feed and frozen food industries; president and general manager of Agricultural Services Association, Bells, Tenn., an agricultural marketing organization; public relations director of the American Feed Manufacturers Association; and manager of advertising and sales promotion programs related to marketing livestock and poultry feeds.

Since its founding in 1893, FIEI has continually broadened its scope of activities in keeping with changing times and challenges in the interests of efficiency and productivity of farmers and industrial equipment users.

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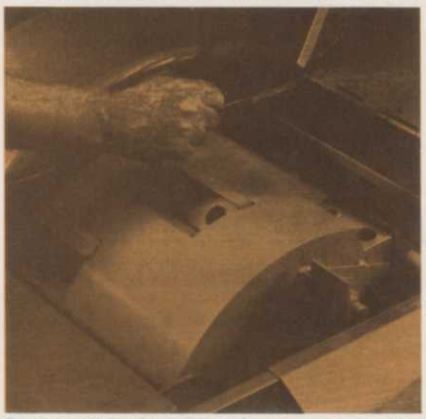
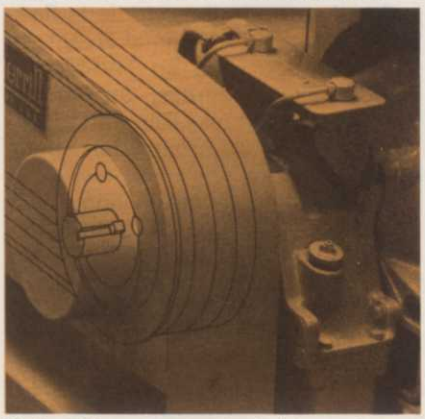
For more than 115 years Mitts & Merrill has been making specialized machinery for industry. A major part of our business is equipment to reduce scrap and waste. This experience is incorporated into design features on our brush chippers that result in higher efficiency and longer, trouble-free service for you. Only Mitts & Merrill brush chippers offer features like these:



Staggered knife pattern for smoother cutting action. Mounted on an all-steel cylinder that, even without an external flywheel, is heaviest in the industry. Each cylinder revolution gives more cuts, produces smaller chips of uniform size. Self-adjusting knives are reversible; give twice the service between sharpening.



Optional torque converter isolates engine and transmission from cutting shock to minimize maintenance. Makes operation virtually fully automatic; increases operator productive time. Available on all models.

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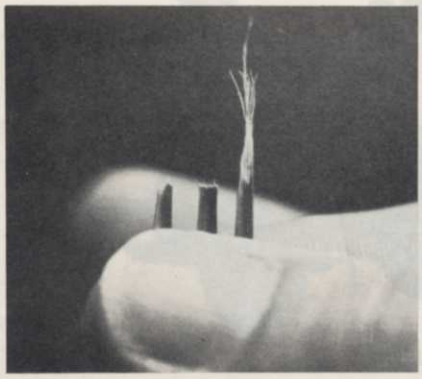
Can you tell ryegrass from bluegrass?

(Careful.)



This photo shows *two* fine-leafed ryegrasses and one Kentucky Bluegrass. The grass on the right is obviously a ryegrass. Of the other two, which is the ryegrass and which is the bluegrass?

Ok, the one in the middle is fine-leafed Pennfine Perennial Ryegrass . . . clean-cut and so fine-bladed it looks like bluegrass. On the left is Pennstar Kentucky Bluegrass, perhaps the best all-around turf grass available today.

If you had trouble telling them apart, you have an idea of the compatibility of these two grasses. Pennfine Perennial Ryegrass and Pennstar Kentucky Bluegrass. They work together. Beautifully. For more information write Pennfine/Pennstar, Box 923, Minneapolis, Minn. 55440.

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Application To Register Herbicide Rejected By EPA

The U.S. Air Force has been turned down by the Environmental Protection Agency (EPA) on a request to register a herbicide for domestic use.

Herbicide Orange, a 50-50 mixture of 2,4,5-T and 2,4-D, has been in the Air Force stockpile since stoppage of its use for defoliation purposes in Vietnam. The Air Force has been looking into ways to dispose of 2.3 million gallons of the product. Presently, 1.5 million gallons are stored on Johnston Island in the Pacific Ocean and the remaining 800,000 gallons are at Gulfport, Miss.

The registration submitted to EPA on Feb. 8, 1973 was to create two products from Herbicide Orange, one known as D&T Herbicide Technical (for shipment to private firms for reformulation) and the other D&T Brush Killer (a diluted product intended for direct sale to users for brush control).

EPA officials rejected the request on the basis of the presence of a highly toxic contaminant known as tetrachlorodioxin. The average dioxin concentration in the surplus herbicide is about 2ppm, said the Air Force. But in the application to EPA, Air Force officials reported that the surplus herbicide contained only 0.5 ppm or less of dioxin.

Pending results of a public hearing on 2,4,5-T which is scheduled for April 1974, the Air Force plans to defer resubmission of additional data to substantiate its claim for registration of certain batches of Herbicide Orange.

Florida Turf-Grass Assoc. Conference Slated Oct. 21-24

"Turf Management From A To Z" will be the theme of the 21st Annual Florida Turf-Grass Association Management Conference, at Pier 66, Fort Lauderdale, Florida, October 21-24, 1973.

According to Dr. E. O. Burt, conference chairman, the Florida Turf-Grass Association is one of the most active and comprehensive turf organizations in the nation. This year's conference will present renown speakers from all over the country, each an expert in his own field.

The first session will be chaired by Stan Cruse, vice president of FT-GA. Speakers will include Dr. Coleman Ward, speaking on "Selecting a Grass," followed by Mr. James B. Moncrief, speaking on "Soils." "Fertilizers" will be discussed by Dr. G. Shannon Smith and Mr. Dalton Harrison and Mr. Elmo Dowling will be speaking on "Basic Principles of Watering" and "Irrigation Equipment."

In the afternoon, James A. Fischer of The Toro Company will discuss "Principles of Mowing" and Mr. Randolph Smith, "Mowing Equipment." "Insects" will be the topic of the address by Dr. James Reinert and Dr. A. DiEdwardo will discuss "Nematodes." Dr. Robert Miller of Chem-Lawn and Dr. Stan Frederickson will address the session on "Diseases of Bermudas and Overseeded Grasses" and "Diseases of Other Warm Season Turfgrasses."

Other speakers on the program include: James Taylor discussing "Principles of Weed Control" and Dr. E. O. Burt "Weed Control with Herbicides." Principles of Landscaping, thru "Planning and Installation" will be covered by Morgan Evans and "Maintenance" by John Poulos. Delegates will also tour of the turf plots at the Agricultural Research Center.

Complete registration information is available from the FT-GA Executive Secretary, Ms. Nona Murphy, 903 Lee Road, Orlando, Fla. 32810.

Johnsongrass Seed Outlawed In Virginia

Dennis E. Brown, supervisor seed and sod for the Virginia department of agriculture and commerce, has issued a reminder to the citizens of that state. Seed of Johnsongrass is a prohibited noxious weed seed.

According to Brown, it is unlawful for any person to transport, offer for transportation, sell, offer for sale, or expose for sale, seed consisting of or containing Johnsongrass. It also is illegal to bring seed of Johnsongrass into Virginia.

Other than the fact that it is considered noxious and unlawful, Brown did not say how to get rid of the weed in established areas.

Many eastern Atlantic states have declared Johnsongrass a noxious weed. Some states have even gone so far as to prohibit its growth. Yet, in many cases the biggest offender of the law is the state itself. Travel along a highway which crosses the low wet lands of the Delmarva and Johnsongrass abounds everywhere. Most of this land is owned by the state or the Federal government.

Trickle Irrigation Tubing Developed By Dow

A new plastic tubing which can be used in trickle irrigation is now available from Dow Chemical, U.S.A.

The tubing is manufactured from ultraviolet light stabilized 12 mil Polyfilm polyethylene film. The film is formed into tubing with two chambers, one a supply tube and the other, smaller, an emission chamber, Water moves from the supply tube into the emission chamber through holes spaced 10 feet apart. The water leaves the emission chamber through holes with a two-foot spacing.

According to Dow, the irrigation tubing provides for uniform flow rates along the entire length of the run assuring accurate application rates of both water and plant nutrients applied through the irrigation system. Flow rates per orifice can be varied from 0.25 gallons per hour to 0.6 gallons per hour by varying the operating pressure of the system from 2 to 12 PSI.

The tubing can be installed either above or below ground and has been designed to withstand burst pressures in excess of 30 PSI which minimizes field maintenance problems. It can be installed in conjunction with a wide range of filtration, pressure regulation and flow regulation equipment to supply the correct amount of water needed. For more details, circle (720) on the reply card.

Mass. Landscape Contractors Offer Six Courses

Six courses in various phases of landscaping will be given by professionals during the fall and winter evening school sessions of the Associated Landscape Contractors of Massachusetts. All the courses will be held at Koon Auditorium, of the Suburban Experiment Station, University of Massachusetts, at Waltham.

A four-week course on Principles of Landscape Design will be given by Timothy Coppola of the architectural firm of Sasaki, Dawson, DeMay Associates. This course will meet at 7:30 p.m. on the evenings of October 15, 29, November 5 and 12, 1973. Dr. Donald Wyman, one of America's most distinguished naturalists and authorities on plant identification, will present a course on Plant Identification the evenings of December 3, 10 and 17. Louis DeVirgilio, professional cost estimator and landscape contractor, will give a six-week course in Plan Reading & Quantity Takeoff on October 24, 31, November 7, 21 and 28, and December 5.

Shepard Williams, landscape architect of North Easton, Mass., will give a course in Basic Landscape Drawing—a six-week course, on the evenings of January 7, 14, 21, 28, February 4 and 11. An advanced course in Landscape Estimating & Costing will be given by Louis DeVirgilio on January 23, 30, February 6, 13 and 27, and March 6.

Homer K. Dodge, architect and engineer, will give a six-week course on Patio & Wall Construction the evenings of January 31, February 7, 14, 21 and 28, and March 7.

The courses are open for attendance by any person associated with the landscape industry. Detailed information on each course and course tuition, to be announced, will be made available on request to the Associated Landscape Contractors of Massachusetts, 950 Boylston Street, Newton, Mass. 02161 or by telephoning (617) 527-1274. Early enrollment is suggested as class sizes are strictly limited.

"EVER-GREEN" TURF IRRIGATION VALVE BOX COVERS...

...other advantages are more obvious!

Golf courses, estates, parks, cemeteries, private clubs, landscaped lawns—why put up with ugly concrete or rusty cast iron turf irrigation valve box covers? Now you can have green covers that blend beautifully with the turf. And they're made of tough SUPERFLEXON® thermoplastic that lasts and lasts. Thermoplastic valve and meter boxes are resistant to moisture, and unaffected by temperature changes. They're also less brittle than concrete or cast iron . . . and much lighter, easier to install and to store. And they cost less! Thousands are in use from coast-to-coast—Philadelphia, Pa. to Sunnyvale, California.

Thermoplastic turf irrigation valve boxes with "ever-green" covers offer a new dimension in appearance as well as utility.

For complete details, write: AMETEK, INC., Plymouth Plastics Division, 502 Indiana Avenue, Sheboygan, Wisconsin 53801.

Meter Pits (round) and Meter Boxes (rectangular) can be supplied with "ever-green" cover.

Also available: Durable, easy-to-install AUTOSTOP®, less costly than concrete curbs. Weather and crumble proof. Never needs painting; impregnated yellow, green, forest brown or white. Write for facts.

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AMETEK

For More Details Circle (142) on Reply Card

New Liquid Inhibitor Slows Vegetation Growth

Rockland Coatings Company has introduced a new liquid retardant that inhibits growth of grass, weeds and bushes by 80 percent.

The product, RC-6 Grass Control, is designed for use in areas such as highway, railroad and power transmission rights-of-ways, golf course roughs and industrial and commercial sites. It is a concentrated liquid compound, which is diluted one part in 100 parts of water. Conventional spray application equipment may be used.

According to the company, one application at the start of the growing season will control the rate of growth for the entire season and reduce normal maintenance requirements by 80 percent. RC-6 Grass Control is reported to be nonphytotoxic to ground cover.

For more details, circle (719) on the reply card.

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The World's First Completely Automatic Sprig Planters And Harvesters

All One-Man Operation

New "Fairway Special" SPRIG PLANTER

With 2" Row Spacing

Designed Especially for Golf Course Fairway Planting

The Fairway Special lays down a carpet of Bermuda sprigs, up to 100 bu. per acre. 36 large planter wheels insert sprigs to desired depth on 2" row spacing. Available in 2-4-6-8 and 10-ft. widths.

The Big Red Line of Harvesters

Designed especially for Custom operators. Digs, loads and cuts to planting length 1000-1200 bu. of clean sprigs per hr. . . up to 2000 bu. when equipped with Side-Loading Elevator. Floating PTO Shaft and Shear-Pin protection. Heavy-duty construction. Side loading elevator optional.

Inquire Now for Delivery This Season

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New Ackley Distributor Named For Ohio

A.B.S. Contractors Supply Company, Cincinnati, has been named distributor for Ackley hydraulic tools for the state of Ohio. The announcement was made by Jack Gallagher of ABS and Harold DePue, Ackley's vice president of marketing.

Am. Society Of Golf Course Architects Prints Directory

The American Society of Golf Course Architects has published its new membership directory, along with information on golf course planning and remodeling. The literature details the role of the designer. For copies of these materials, write the American Society of Golf Course Architects, 221 N. LaSalle St., Chicago, Ill. 60601.

Illinois Turfgrass Field Day Scheduled Sept. 18

The Illinois Turfgrass Field Day will be held September at the Ornamental Horticulture Research Center, South Lincoln Ave., Urbana, Ill.

The event, sponsored by the University of Illinois and the Illinois Turgrass Foundation, will permit interested persons the opportunity to view turf plots and evaluations conducted at the research center. Other items of interest include: effects of aquatic herbicides on irrigation water, fungicide evaluation studies, putting green cultivation study and turfgrass renovation with herbicides.

Elm Beetle Repellant Found By Mass. Firm

A promising approach to elm tree protection from the elm bark beetle has been discovered by Arthur D. Little, Inc., Cambridge, Mass.

According to an announcement, the company has succeeded in synthesizing a water soluble, hydrolyzable repellant. The product repells elm bark beetles from elm trees.

The company plans to commercialize the technology through a licensing program. Interested parties are invited to contact the company at 25 Acron Park, Cambridge, Mass. 02140.

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— classifieds —

When answering ads where box number only is given, please address as follows: Box number, c/o Weeds Trees and Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

Rates: "Position Wanted" 10¢ per word, minimum $3.00. All other classifications 20¢ per word, minimum $4.00. All classified ads must be received by Publisher the 10th of the month preceding publication date and be accompanied by cash or money order covering full payment. Boldface rule box: $25.00 per column inch.

POSITIONS WANTED

SALES REPRESENTATION: Washington, D.C. (Government), Virginia, Maryland, and Deleware. Seasoned sales organization can handle equipment, turf related chemicals, or specialties. We can tailor our marketing capabilities to meet your needs. W. H. Chadbourne, Agronic's, Inc., 10818 Fairchester Drive, Fairfax, Virginia 22030. Phone 703 471-9660.

GOLF COURSE Superintendent, 30, available at end of present season. Ten years experience. Midwest. Graduate of Univ. Winter Turf School, member of GCSAA. Qualified in all phases of golf course maintenance. Box 104, Weeds Trees and Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

HELP WANTED

LOVE CONQUERS ALL

Our Landscape Design & Private Residential Landscape Salesman decided to get married and move way. Therefore we at MONROE TREE & LANDSCAPE, Inc. are back looking for the right man to fill this excellent position.

We need a professional between 24 and 35 years old with college training plus 4 to 6 years residential landscape experience.

Many benefits — Rewarding Future.

Call collect or write today:
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Rochester, New York 14623
716 436-2900

Love is Fine — Being married along with that is even better.

ARE YOU, 1. Experienced in all phases of tree work? 2. Able to estimate private work as well as large clearing and grubbing jobs? 3. A leader of men? 4. Willing to work to turn a good tree business into a great tree business? 5. Ready to be practically your own boss? If so, and you would like a salary and commission as well as a company car and all our company fringe benefits, please write or call. Heyser Landscaping, Inc., 400 North Park Ave., Norristown, Penna. 19401. Phone 215 539-6090.

MANAGER WANTED. Line Clearance Operation. 10 to 15 crews. Candidate must be experienced as Manager for recognized line clearance company. Must be willing to move to southeastern state. All inquiries kept in strictest confidence. Send resume c/o Vern Milhoan, Nelson Tree Service, Inc., 810 N. Avenue, Dayton, Ohio 45406.

QUALIFIED golf course superintendent wanted; must have experience with planning and supervising activities concerning golf course maintenance and construction. Write Box 103, Weeds Trees & Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

DISTRIBUTORS for D. J. Andrews, Inc. stump cutter teeth, pockets and bolts. Best wholesale and retail price in U.S.A. Add to this exclusive area, local advertising at our expense, etc., and you have our story. D. J. Andrews, Inc., 17 Silver St., Rochester, N.Y. 14611. Call 716 235-1230, or 716 436-1515.

DUE TO EXPANSIONS of our company in several new areas we are interested in hiring graduate foresters or foremen with at least a high school diploma who can qualify to start our supervisory training program. If interested, please write the Personnel Director, 139 6th St., West Des Moines, Iowa.

EXPERIENCED TREE CLIMBER: Shade tree maintenance $4.00-$5.50 per hour. Send Resume: The Tree People, Box 10026, Honolulu, Hawaii 96816.

SEEDS

SOD QUALITY MERION SEED for discriminating growers. Also Fylking, Delta, Park, Newport, Nugget and Pennstar bluegrasses as well as fine fescues. We will custom mix to your specifications. Michigan State Seed Company, Grand Ledge, Michigan 48837. Phone 517 627-2164.

CROWNVETCH SEED: Penngift and Chemung varieties. Direct all inquiries to: Walter C. Mehlenbacher, Castile, New York 14427. Phone 716 493-2553.

ALL VARIETIES, straight or mixed to specifications, bluegrasses, fescues, bents, others. Markell Seeds, P.O. Box 3397, Green Bay, Wisconsin 54303. Phone 414 437-0851.

FOR SALE

CHAIN SAW CHAIN, bars, sprockets, sharpening equipment, saw parts and accessories. Save to 40%. Professional quality, fully guaranteed. World's largest mail order supplier of this equipment. Free catalog. Write Zip-Penn, Box 43073-A68, Middletown, Ky. 40243.

"I'm afraid I can't help you lady. My specialty is roots."

DOUBLE EDGE sod cutter blades. Will fit any Ryan sod cutter. Works like double edge razor blade. Cuts much more sod per blade. Made to bolt on both ways. $24.00 plus postage. New automatic sod loaders for direct loading to pallets, trucks or trailers. No workers needed on ground. Both products developed and designed by Hadfield. Write or call Glen Hadfield, 4643 Sherwood, Oxford, Michigan 48051. Phone 313 628-2000.

GOLD COURSE GREEN DESIGNS including specifications, irrigation and drain tile layout, $35.00 each. For more information, write Golf Course Specialty, 330 Cicero Ave., San Antonio, Texas 78218.

ARPS stump cutter teeth, top quality and best price in U.S.A., D. J. Andrews, Inc., 17 Silver St., Rochester, New York 14611. Call 716 235-1230.

ROGERS SEEDER — Model 524-100, A-1 condition, used twice. Spring purchase. Price reasonable. P.O. Box 1165, Springfield, Mass. 01101. Phone 413 736-0051.

VERMEER STUMP GRINDER, Model 10, $1800. Walt Parker, 1684 Bowers Ave., Santa Clara, Calif. 95051. Phone 408 247-0373.

MISCELLANEOUS

TREE APPRAISALS, SURVEYS, loss evaluations and expert consultation services. For names of members of the American Society of Consulting Arborists, Inc., throughout the country, contact: Executive Director ASCA, 12 Lakeview Ave., Milltown, New Jersey 08850.

LANDSCAPE DESIGN KIT 37 rubber symbol stamps and ink pad. Postpaid $25.00 COD $26.00 plus postage. Order direct or brochure sent. California add tax. T-Gordon's, Box 741T, Reseda, California 91335.

USED EQUIPMENT

FOR SALE: 1 — Bean Roto Mist 301, trailer mounted, tandem axle, electric brakes, 300 gallon tank, very good condition. No longer doing mist spraying, $6000.00. 1 — 1968 Myers hydraulic sprayer, 1000 gallon tank, 60 G.P.M. pump, skid mounted — Wisconsin 4 cylinder engine, expanded metal no slip covering on top of sprayer, $2500.00 1—N-600 Ford 1963—121" W.B.—292 V-8 engine, vacuum booster brakes, 5 speed transmission, 2 speed axle, no spin differential, 8:25 x 20 tires. Heavy duty springs, 27,200 miles, Braden winch 12,000 pound overhead frame tree mover, $1500.00. 1 — N-700 1963 Ford — 163" W.B. — 5 speed transmission, 1597.2 hours since new engine (7-11-73), new springs front, new kingpins, new tie rod ends, Pitman 58-8000 pound capacity. All hydrulic extendable boom. Unit still in use, $3500.00. Contact Chas. F. Irish Co., Inc., 24900 Groesbeck Highway, Warren, Michigan 48089. Phone 313 527-2921.

RECONDITIONED brush chippers, sprayers, log splitters, stump routers, bucket trucks. Let us know your needs. Equipment Sales Company, 5620 Old Sunrise Highway, Massapequa, New York 11758. Phone 516 799-7619.

trimmings

EARTH PLANTS AND MOON SOIL appear to do well together. In tests conducted by the University of South Alabama, plants grown in soil brought back by astronauts appeared to grow better and live longer than ordinary plants. Vernon Scholes, a biology professor who conducted the tests for NASA, reported that based on his experiments moon dust stimulates chlorophyll.

DIET OF WEEDS is another name for a new cookbook on the market called "The Wild Flavor." Written by Mrs. Marilyn Kluger, the book depicts a great variety of plants and weeds which can be used in cooking. Consider Sorrel Soup (takes a cup of sheep sorrel) or Cattail Pollen Flapjacks (1 cup cattail pollen sifted through a fine-meshed tea strainer) as new uses for problem weeds.

IF WE WERE TO RETURN to horses and get rid of all the automobiles city street cleaners would have as big a job as ever trying to keep streets clean. New York City was estimated to have 120,000 horses around the turn of the century. Sanitary engineers estimate that these horses contributed over 1300 tons of manure a day to the street environment. Contrast this to a situation of modern day where a horse might be substituted for each auto and truck in the U. S. The environmental contribution arising from this situation would produce a staggering 10 million tons of manure a day.

NATIONAL SAFETY COUNCIL points out that there are 10 items which no OSHA officer overlooks when he checks out a business. They are: 1. electrical wiring, loose connections, switch plates and covers; 2. fan guards; 3. floor conditions and poor housekeeping; 4. aisle markings and clear aisles; 5. electrical panels, which must be kept closed; 6. grounding of electrical systems; 7. limits of 30 pounds air pressure for cleaning purposes. 8. fire extinguishers; 9. exit signs and means of egress; 10. proper maintenance of OSHA records. If you are not in compliance with all of these, consider it an automatic violation subject to fine.

WORK is progressing on the restoration of the Joyce Kilmer home in New Brunswick, N. J. Kilmer, the poet who wrote "Trees," was born in the house which is to become a museum and headquarters of the New Jersey Arborists Association. The group has transplanted on the site a tree which experts believe is an offspring of the original oak which inspired Kilmer's poem.

SOCIAL SECURITY may be a good thing, but it is time to analyze how much of your pay goes to help support this program. Since 1937, the tax rate paid by employer and employee alike has risen from one percent on the first $3,000 to 5.85 percent of the wages up to $10,800. In 1974, the maximum amount of wages taxed for this program will increase to $12,000. If you earned $10,800 in 1937, you would have paid $30 in social security taxes. If you earned $10,000 or more during 1972, you paid $468. This year the ante is up to $632 for persons making $10,800 or more. And next year it goes even higher!

ENVIRONMENTAL IMPACT STATEMENTS are the hedge for continuing a practice which may be in question. The Environmental Protection Agency has now listed a code by which these statements are classified. Basically it consists of a two letter alpha code followed by a number. Here's what you'll find it under the "general nature of comments" section: LO, ER, EU, which translates to Lack of Objection, Environmental Reservations, and Environmentally Unsatisfactory. The numbers are 1, 2, or 3 which mean: adequate, insufficient information, or inadequate, in that order. So if you have a EU-3 code on your statement, it means that "EPA believes that the proposed action is unsatisfactory because of its potentially harmful effect on the environment . . . . and that the Agency believes that the draft impact statement does not adequately assess the environmental impact of the proposed project or action, or that the statement inadequately analyzes reasonable available alternatives."

HOW FAST ARE WE consuming motor fuel? The Federal Highway Administration says that 105.6 billion gallons of fuel were taxed and consumed in the U. S. in 1972. Net state motor-fuel tax receipts amounted to $7.59 billion. That amount was 7.7 percent higher than in 1971 the greatest annual increase in 17 years.

MEAT FOR KIDS but not adults may be coming as scientists continue to perfect soybeans as a potential protein source. That's the report from Dr. George L. Sutherland, director of research and development for the agricultural division of American Cyanamid Company. He also foresees the possible disappearance of many fresh fruits and vegetables from the dinner table. Sutherland cites the disappearing labor force in the labor-intensive crops, social decisions which restrict development and technology and increased competition between man and animals for protein as the factors influencing man's future diet.

OSHA has amended standards on powered industrial trucks, cranes, derricks and portable power tools. Exempt are vehicles intended primarily for over-the-road hauling. An "approved" industrial truck applies only to approvals for fire safety purposes for the intended use by a nationally recognized testing laboratory. An industrial truck is now defined as "unattended" when the operator is more than 25 feet from the vehicle or cannot see it.

Further, OSHA has ruled that "only designated personnel shall be permitted to operate" a crane or derrick, rather than authorized and trained operators.

The standard requiring guards on portable power saws with blades two inches or greater in diameter was amended to exempt such saws used in cutting meat. Among other changes to power tools was a clarification of the operating switch or control requirements for various types of circular saws, chain saws, power drills, grinders and routers.

OUR MISTAKE

Last month we inadvertently left out a note to readers interested in obtaining a copy of the Turfgrass Insects chart. The chart appeared on the inside back cover. The O. M. Scott & Sons Company has made this full color drawing available to readers of WEEDS TREES AND TURF. For an 8½ x 11 inch color print of the chart, write to O. M. Scott & Sons Company, Marysville, Ohio 43040. There is no charge. JAS.

NEW from ProTurf

Victa

Kentucky Bluegrass seed

...and 6 good reasons why its name is "Victa".

1 **Persistent deep blue-green color.** Scotts research and development tested Victa Kentucky Bluegrass for 11 years on plots in Marysville, then at several research substations, and finally at state agricultural experiment stations, in sod fields, on golf courses, and in home lawns all over the country. During those 11 years, Victa proved to have strong summer color which lasted until late fall, in the North. On the West Coast, color lasted throughout the year.

2 **Thick, dense growth with wider and stronger leaf blades.** Victa's spring growth profile is naturally lower than Pennstar, Fylking, or Newport, which makes it ideal for golf turf or any other turf where carpet-like texture is desirable. Lateral instead of vertical growth means Victa fills in bare spots vigorously, choking weeds out. (In tests with equal amounts of Victa and Merion sprigged in two identical 3′ x 4′ squares of bare earth, Victa covered 80% of its square in eight weeks;the Merion plants covered only 55%.)

3 **Extraordinary stress tolerance.** Victa's low growth profile makes it naturally adaptable to close mowing; Scotts tests found Victa maintains a thick, dense, complete cover even when cut to ¾″. Victa performs well under virtually all environmental conditions, including full sun. In addition, Victa is one of the very few bluegrasses to perform successfully in shade mixtures.

4 **Unusual disease resistance.** Aware of most bluegrasses' vulnerability to turf disease, Scotts carefully screened Victa during the testing years, routinely inoculating it with disease during the growing season. The results: Victa proved to be one of only a few bluegrasses in existence with a high degree of resistance to leafspot. Testing in geographic locations around the country showed that Victa also has a good level of resistance to stripe smut, snowmold, mildew, and rust, and more resistance to dollar spot than either Merion or Fylking.

5 **Vigorous germination and growth.** Victa seeds are larger and plumper than most other varieties, which helps the seedling to withstand environmental stress. Victa seed is characteristic of this rugged, very persistent grass—it's excellent quality, with high varietal purity and high yield. In lab tests reporting Victa's characteristics for U. S. Plant Patent #3,156, Victa seed germinated at an unusually fast rate: 41% by the end of the first week, 99.6% in 28 days.

Once seedlings are established, Victa requires less maintenance than many other top bluegrass varieties, yet responds beautifully to fertilizers.

Leafspot damage in May. Common Kentucky Bluegrass on the right, Victa on the left.

6 **Compatibility with other grasses.** In addition to offering excellent turf performance on its own, Victa can blend its good qualities with those of other grasses to achieve a specific purpose. Victa is currently being offered by ProTurf in blends with Windsor, Nugget, Merion, C-26, and other varieties.

ProTurf Victa. A robust new bluegrass with 11 years of rigorous testing behind it . . . from the people who've been developing top-quality seed for over a century.

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Marysville, Ohio 43040
P. O. Box 2079, Oakland, California 94604

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baron

U.S. Plant Patent No. 3186, Dwarf Variety

the aristocrat of Kentucky bluegrasses

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STRONG ROOT GROWTH

STRONG ROOT GROWTH is the secret of Baron's dense turf. The extremely rhizomatous nature of Baron Kentucky Bluegrass rapidly forms a dense turf which is lifted and transported easily without damage.

QUICK ESTABLISHMENT

QUICK ESTABLISHMENT. This laboratory photo shows a germination test on Baron (right), as compared with Merion, just two weeks after sowing.

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